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OF THE

FISHERY BOARD FOR SCOTLAND,

Being for the Year 1906.

IN THREE PARTS.

PART I.—GENERAL REPORT.
PART II.—REPORT ON SALMON FISHERIES.
PART III.—SCIENTIFIC INVESTIGATIONS.

PART I.—GENERAL REPORT.

Presented to both Houses of Parliament by Command of His Majesty.

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TWENTY-FIFTH ANNUAL REPORT.

TO THE RIGHT HONOURABLE

JOHN SINCLAIR, M.P.,

His Majesty's Secretary for Scotland.

FISHERY BOARD FOR SCOTLAND,
EDINBURGH, 10*th May*, 1907.

SIR,—In terms of 45 & 46 Vict. c. 78, we, the Members of the Fishery Board for Scotland, have the honour to present the following Report, being for the year 1906:—

PART I.—GENERAL STATEMENT.

TOTAL RESULTS.

The general results of the Scottish fisheries in the year under report have been, upon the whole, very satisfactory. Though the fish landed has not in quantity equalled the figures of either 1904 or 1905, which were both record years in that respect, yet in value the catch of 1906 exceeds that of any year hitherto recorded. That position was previously held by 1905, with a total of £2,649,148; but 1906 shows a value of £2,977,593, or £328,445 above any previous record.

Record in Value.

In the matter of the quantity of fish landed, both the years 1904 and 1905 exceeded 1906. The figures are—for 1904, 7,947,829 cwts.; and for 1905, 7,856,310 cwts.; while for 1906 the total was 7,593,369 cwts Thus we have an increase in value for 1906 as compared with 1905 of £328,445, with a decrease in catch of 262,941 cwts. This is explained by the higher prices obtained for herrings during 1906.

Decrease in Quantity.

VESSELS EMPLOYED.

The number of vessels employed in the sea fisheries of Scotland during the year was 10,554, or a decrease from the preceding year of 27. This decrease in number was, however, accompanied by an in-

Decrease in Number.

Increase in Value.

crease in the value of the whole fleet of no less than £812,854, which illustrates in a striking manner the rapid transition going on in the fishing industry of Scotland, whereby small and ineffective vessels are being replaced by larger and more effective boats. At the present time there is no sign of any arrestment of the movement. On the contrary, it is more active than ever. The remunerative herring fishing of the past year has greatly stimulated the movement by encouraging enterprising and successful fishermen to invest their earnings in large steam-propelled herring-fishing boats.

SUMMARY.

The following Table gives a summary of the means of capture employed, and the resulting catch in Scotland for the last ten years:—

Year.	Number of Vessels.	Tonnage.	Value of Boats and Gear.	Total Catch.*	
				Quantity.	Value
			£	Cwts	£
1897	11,633	111,933	1,922,685	5,001,672	1,627,754
1898	11,576	113,557	2,029,384	6,558,768	1,879,866
1899	11,245	114,448	2,383,776	5,145,076	2,189,933
1900	11,275	119,426	2,711,877	5,369,265	2,325,994
1901	11,201	124,639	3,001,301	6,385,170	2,238,310
1902	11,097	131,692	3,212,455	6,866,028	2,502,668
1903	11,008	140,531	3,448,168	6,518,808	2,401,287
1904	10,891	140,396	3,431,284	7,947,829	2,231,102
1905	10,581	136,385	3,304,695	7,856,310	2,649,148
1906	10,554	142,081	4,117,549	7,593,369	2,977,593

* Excluding shell-fish.

CLASSIFICATION OF VESSELS EMPLOYED.

Of the total of 10,554 vessels employed in the direct work of the Scottish fisheries in 1906, 9,735 (of the value of £916,973), or 92 per cent. of the whole, were boats propelled by sails or oars. During the year the number of sailing vessels decreased by 371, which again shows the rapidity with which the small and illequipped inshore boats are falling out of the race, and are being replaced by larger and better-equipped boats.

Increase of Steam Vessels.

The steam-propelled vessels employed in the direct work of fishing numbered 819, as against 475 in 1905, or an increase of 72 per cent. Of these 819 vessels, 274, of the value of £1,081,284, were engaged in trawling for white fish; and 545, of the value of £1,155,770, fished with lines for white fish (steam liners) or with nets for herrings (steam drifters).

The following is a summary of the number and value of vessels engaged in the Scottish fisheries for the past decade arranged according to their means of propulsion:—

YEAR.	SAILING VESSELS.		STEAMERS.			
			Trawlers.		Liners and Drifters.	
	No.	Value.	No.	Value.	No.	Value.
1897	11,459	£687,040	117	£359,140	57	£125,480
1898	11,386	706,855	149	491,440	41	84,535
1899	11,004	764,515	207	783,440	44	82,780
1900	10,973	831,670	232	938,740	70	145,490
1901	10 848	888,041	256	1,060,205	97	200,910
1902	10,722	944,814	275	1,185,825	100	205,620
1903	10,572	994,552	280	1,216,423	156	355,915
1904	10,417	997,067	270	1,102,350	204	453,095
1905	10,106	959,861	266	1,026,970	209	452,080
1906	9,735	916,973	274	1,081,284	545	1,155,770

Increase of Steam Drifters.

The most noteworthy point in this table is the fact that during the year sailing vessels have gone down by 371, while steamers have increased by 344. Of this increase 8 have been trawlers and 336 steam liners and drifters, but nearly all drifters.

DIFFERENT FISHERIES.

HERRING FISHERY.

Importance of Herring Fishery.

This fishing holds its position as the mainstay of the fishing population. It affords the means of livelihood to 35,900, or 92 per cent. of the fishermen of Scotland. It bulks so largely in the total fisheries of Scotland that its success or failure practically determines the character of the fishing for the year.

Decrease in Quantity. Increase in Value.

In 1906 the total quantity landed did not equal the catch of either 1904 or 1905, but only in these two years was the catch ever exceeded. But in value—that is, the price paid to the fishermen—the herring fishing of 1906 exceeded the highest previous record (that of 1905) by £306,083.

The following table gives the result of the herring fishing for a period of ten years:—

Year.	Quantity.	Value.	Average Price per Cwt.
	Cwts.		
1897	2,965,965	£707,555	4/9¾
1898	4,703,641	952,402	4/0½
1899	3,207,078	1,143,296	7/0¼
1900	3,520,216	1,243,407	7/
1901	4,338,635	1,061,034	4/10¾
1902	4,753,944	1,360,492	5/8½
1903	4,279,485	1,244,656	5/9¾
1904	5,432,494	1,017,541	3/9
1905	5,342,777	1,343,080	5/
1906	4,979,848	1,649,163	6/7½

SCOTTISH BOATS IN ENGLAND AND IRELAND.

Year by year the Scottish herring fishermen are extending their operations on the coasts of England and Ireland. The following are the results of the operations of Scottish boats in these countries for the last ten years:—

Year.	ENGLISH FISHING.			IRISH FISHING.		
	No. of Boats.	Catch.	Value.	No. of Boats.	Catch.	Value.
		Cwts.	£		Cwts.	£
1897	592	757,000	122,860	61	12,000	2,700
1898	686	628,544	78,426	48	37,005	6,595
1899	679	822,500	242,460	...	17,500	6,240
1900	910	1,050,931	259,436	58	31,150	9,490
1901	951	850,941	197,126	104	45,619	15,718
1902	1009	1,445,797	356,428	158	35,157	12,456
1903	1184	1,166,928	213,462	218	60,928	21,967
1904	996	1,575,687	249,974	280	59,830	22,035
1905	1207	1,539,672	485,278	439	59,646	30,780
1906	1292	1,210,236	477,106	307	53,559	35,556

The above figures are not included in the statistics already given of the Scottish fisheries. Though the fish are taken by Scottish boats the returns are included in the fishery statistics of the country in which the fish are landed. For the two countries the amount is 1,263,795 cwts. and the value £512,662.

SAILERS AND STEAM DRIFTERS.

For the first time it has been found necessary to distinguish in the Board's statistics between the herring catches of sailing drifters and steam drifters. This has been necessitated by the remarkable success and the consequent rapid increase in the number of steam propelled vessels engaged in the herring fishing. The following is a statement of the results for 1906:—

	No.	Total Catch.	Total Value.	Value per Cwt.
		Cwts.	£	s. d.
Sailing Vessels, ...	9669	3,413,484	1,058,788	6 2½
Steam Drifters, ...	545	1,565,177	589,771	7 6½

The difference in the price per cwt. obtained by the two classes of boats is most striking, and supplies a sufficient explanation of the rapid increase of steam drifters. The difference in price amounts to 1s. 4d. per cwt., or 4s. 8d. per cran. This is in addition also to the advantage of being able to proceed more frequently to sea, and being independent of calms.

CURED HERRINGS EXPORTED.

The total export of cured herrings for the year was 1,542,688 barrels. There was a shortage in exportation proportionate to the decrease, from the previous year, of the herring catch. The exportation was, however, high above the average. As formerly the chief exportation was to Germany and Russia.

YEAR.	*TO GERMANY.	TO RUSSIA.
	Barrels.	Barrels.
1897 . .	573,337	161,572
1898 . .	1,077,296	303,088
1899 . .	714,230	166,873
1900 . .	769,126	172,462
1901 . .	998,240	233,129
1902 . .	1,049,502	292,987
1903 . .	794,711	303,202
1904 . .	1,095,683	384,443
1905 . .	1,057,315	430,554
1906 . .	1,025,886	424,200½

* About 50 per cent. of the total quantity of herrings exported to Germany is sent over the frontier to Russia.

WHITE-FISH FISHING.

Second only in importance to the herring fishing is the white-fish fishing. This branch of the industry is carried on by means of two classes of vessels and by two different methods of fishing. The two classes of vessels are, as in the case of the herring fishing, those propelled by sails or oars and those propelled by steam. The two methods of fishing are line fishing and trawling. In this fishing the two methods of fishing do not coincide with the two methods of propulsion. While almost every vessel engaged in trawling is steam-propelled, line fishing is not confined to sailing vessels alone. A number of steam vessels (191) engage in line fishing (steam liners).

The white-fish fishing of 1906 was the highest on record, both as regards quantity and value. In quantity it exceeded that of 1905 by 77,489 cwts., and in value by £9,802. The totals for both these years were:—1905—2,481,085 cwts.; value, £1,296,727; and for 1906—2,558,574 cwts.; and £1,306,529.

The usual Table of the progress of the white-fish fishing of Scotland for ten years follows:—

Year.	Quantity.	Value.
	Cwts.	£
1897	2,009,582	913,687
1898	1,842,430	923,346
1899	1,923,175	1,040,110
1900	1,834,498	1,074,600
1901	2,024,867	1,166,919
1902	2,076,580	1,133,088
1903	2,168,973	1,145,887
1904	2,459,373	1,202,942
1905	2,481,085	1,296,727
1906	2,558,574	1,306,529

The two following Tables separate the above totals into the results of each of the two methods of fishing by which that total result is obtained—namely, by trawling and line fishing:—

TRAWLING.

Year.	No of Vessels (Steam).	Catch.	
		Quantity.	Value.
		Cwts.	£.
1898	149	778,731	449,278
1899	207	980,396	597,743
1900	232	1,073,164	699,587
1901	256	1,325,072	820,813
1902	275	1,465,073	812,229
1903	280	1,566,370	829,932
1904	270	1,705,633	841,757
1905	266	1,745,431	948,117
1906	274	1,870,517	957,008

LINE FISHING.

Year.	No. of Vessels.		Catch.	Value.
	Steam.	Sail.		
			Cwts.	£
1898	39	5715	1,050,000	470,000
1899	38	5512	939,000	440,000
1900	52	5404	757,000	371,000
1901	75	5367	696,000	341,000
1902	68	5154	608,700	318,300
1903	91	4884	602,600	315,900
1904	129	4462	753,700	361,200
1905	164	4593	735,654	348,610
1906	191	4425	688,057	349,521

For purposes of comparison we may here place side by side the result of the methods of fishing by trawl and line for the same period :—

Year.	Trawl (including Steam and Sailing Trawlers).	Line.	Total.
	Cwts.	Cwts.	Cwts.
1898	783,000	1,050,000	1,833,000
1899	983,000	939,000	1,922,000
1900	1,077,000	757,000	1,834,000
1901	1,328,000	696,000	2,019,000
1902	1,467,000	608,700	2,075,000
1903	1,566,000	602,600	2,168,600
1904	1,705,600	753,700	2,459,300
1905	1,745,431	735,654	2,481,085
1906	1,870,517	688,057	2,558,574

This Table shows the tendency which we have frequently reported, namely, the passing of the larger proportion of the white-fish fishing from the line fishermen into the hands of the trawler.

PERSONS EMPLOYED.

The number of persons employed in the fisheries of Scotland and the various industries subsidiary thereto in the year 1906 was 92,305. Of these, 38,856 manned the fishing fleet, and the remainder were engaged in the operations connected with the fishing industry on shore.

COMPARATIVE VALUE OF NETS AND LINES, AND OF LINE AND TRAWL-CAUGHT FISH.

Two charts accompany this Report. One of these traces, since 1893, the movements in the annual values of great lines employed on board East Coast sailing boats and steam vessels, and, since 1899, those of drift netting used on board of East Coast steam vessels; while the other shows, for the former period, the annual prices per cwt. of each of the three more important species of round fish, viz.:—haddocks, cod, and ling, taken by line and by trawl. Over the period brought under review, the following represent the average line prices:—haddocks 10s. 4d., cod 8s., and ling 6s. 3d.; while the corresponding average trawl prices were 10s. 7d., 8s. 6d., and 6s. 1d.

MEANS OF CAPTURE.

Boats and Vessels. (Appendix A, No. I., pp. 8 23.) Fishing Gear. Fishermen and Boys.

During the year under review there were employed in the capture of sea fish round the Scottish coasts 10,554 boats and vessels, of the gross tonnage of 142,081 tons, and the aggregate value of £3,154,027; fishing gear of the total value of £963,522, and 38,856 fishermen and boys, these figures showing, in comparison with those of 1905, a reduction of 27 in the number of boats and vessels, increases of 5,696 tons in their tonnage, and £715,116 in their value, an excess in the value of fishing gear to the extent of £97,738, and 2698 more fishermen and boys.

Allocation: Boats and Vessels. Number.

Of the total number of boats and vessels engaged in the prosecution of the industry, 9669, or 92 per cent., consisted of sailing boats employed for the greater part in the capture of herrings by means of drift, seine, and trammel nets, and of white fish with hooks and lines; *545, or 5 per cent., were steam vessels used—except in the case of several mussel dredgers—in herring drift-net and long-line fishing; and 340, or 3 per cent., were steam and sailing beam and otter trawlers.

Tonnage.

Of the gross tonnage, 114,772 tons, or 81 per cent., was absorbed by the sailing boats; the steam drifters and liners accounted for 14,506 tons, or 10 per cent.; and the trawl vessels represented 12,803 tons, or 9 per cent.

Value (including Fishing Gear).

Of the combined capital, amounting to £4,117,549, represented by the boats and vessels and fishing gear, £1,653,397, or 40 per cent., was invested in sailing boats, nets—consisting of drift, seine, and other forms, lines—comprising great, small, and hand, bush and buoy ropes and stoppers, and crab and lobster creels; £1,340,938, or 33 per cent., was invested in steam herring drifters and long liners, and nets, lines, and bush and buoy ropes; and £1,123,214, or 27 per cent., in steam and sailing beam and otter trawlers, and their fishing accessories.

Fishermen and Boys.

30,870, or 79 per cent., of the fishermen and boys were employed on board the first group of boats and vessels; 5030, or 13 per cent., on the second; and 2956, or 8 per cent., on the third,

I. FISHING BOATS AND VESSELS (OTHER THAN BEAM OR OTTER TRAWLERS) PROPELLED BY SAILS OR OARS.

Sailing Boats. Downward

Except in so far as regards the value of seine nets and the number and value of crab and lobster creels, the statistics relating to sailing boats show, in comparison with those of 1905, a uniform series of downward movements.

---

* In view of the increasing number of English steam vessels engaged in drift-net fishing off the coasts of Scotland and the extent to which their takes contribute to the Scottish returns of herrings landed, it has been deemed advisable in future to include statistics of these in the relative Appendix to the Board's Annual Report, where they will accordingly be found on this occasion for the first time. This fact explains how there has been returned for 1906, and referred to herein, a much larger number of steam drifters and long liners than is accounted for by the year's addition of 65 vessels to the Scottish fleet.

Number, Tonnage, and Value of Boats and Vessels.

Number.

For the downward movement in relation to the number of boats and vessels—extending to 369—the East Coast is responsible to the extent of 48 per cent., Orkney and Shetland are accountable for 11 per cent., and the West Coast for 41 per cent.

The East Coast districts more closely identified with the movement embrace, in the order given, Buckie, Findhorn, and Peterhead, and those associated with it less closely include, in a similar order, Banff, Aberdeen, Stonehaven, and Montrose, Of the two bracketed northern districts, Shetland is involved in the decrease in a much greater degree than Orkney; while, on the western seaboard, the movement is more apparent in the case of Lochbroom (which is responsible for by far the largest decrease), Lochcarron and Skye, Stornoway, and Rothesay.

Factors at Work.

Of the factors at work in producing this movement on the East Coast, the most notable is the increasing tendency to discard sailing boats in favour of steam vessels, while the decrease affecting the West Coast is attributable, in a large measure, to the failure to replace worn out craft, principally of the smaller size, the fishermen preferring, in many instances, to hire themselves on board of vessels of a more modern type; and those two factors likewise account for a large proportion of the decreases in the cases of tonnage and value (including the value of fishing gear), which amount respectively to 4361 tons and £67,251, or 4 per cent. in either case.

Tonnage and Value.

Replacement of Sail Boats.

As illustrating the extent to which, in recent years, the building of sailing boats on the East Coast has been abandoned and those on hand have been displaced by steam vessels, it may be stated that, since 1903, no sail boats of the type so much in demand for a considerable number of years previously—costing from £720 to £850—have been constructed in Peterhead district, while, since the introduction of steam drifters in 1900, the number of sail-propelled boats belonging to that district has suffered a diminution of 38 per cent.

Nets.

Ramie for Drift Nets.

In the annual report for Helmsdale District (Appendix M, p. 256) reference is made to the conduct, during the year, of an experiment designed to test the suitability of ramie for use in the manufacture of herring drift nets. With that object in view four nets were made of this material and were employed in the prosecution of the early and late summer herring fishings by the crew of a steam drifter, who found them to be possessed of two of the essential characteristics of effective drift netting, viz., the quality necessary for effecting the capture of the fish, and the strength requisite for bearing their weight when meshed. The crew also formed the opinion that nets composed of ramie would prove to be of a more durable nature than those made of cotton, and this opinion would appear to be well founded if, as is represented, the former material is stronger and less absorbent than the latter. The texture of the twine as spun was, however, much too fine for the purpose intended, and, in consequence, the herrings became meshed so firmly that much difficulty was experienced in shaking them free of the nets. As a result of the experiment, the owner of the nets ordered a full drift—composed, however, of heavier twine—to be delivered in time to admit of its employment in the prosecution of the West Coast herring fishing; and it will be interesting to note whether, under this modified condition, the nets prove to be sufficiently superior to those at present in use to justify the matter being carried beyond the experimental stage.

Cutch v. Tannic Acid.

Through the kindness of the Congested Districts Board, who agreed, on certain conditions, to bear the expense involved, it was found possible, during the year, to carry out an experiment suggested by the Caithness Fishermen's Association with the view of determining the respective merits of tannic acid and cutch as preservatives of herring drift nets. Two new nets, bought for the purpose, were barked by Dr T. Wemyss Fulton, the Scientific Superintendent of the Board—the one with tannic acid and the other with cutch—and these were tested at the English herring fishing by the master of the motor fishing boat "Pioneer," who furnished a report on the result, dated 1st December, a copy of which will be found under Appendix Q, p 287. From a perusal of this report, it will be seen that the result of the test was to demonstrate the relative superiority of cutch as a preserving agent.

II. STEAM FISHING VESSELS (OTHER THAN BEAM AND OTTER TRAWLERS).

The following Table shows, for each of the last 8 years, the number, tonnage and value of the Scottish steam vessels employed (excepting in the case of several mussel dredgers) in drift-net and long-line fishing, the value of their fishing gear, and the number of men and boys by whom they were manned, as well as the respective percentages of increase:—

YEAR.	VESSELS.						FISHING GEAR.		MEN AND BOYS EMPLOYED.*	
	Number.	Percentage of Increase.	Tonnage.	Percentage of Increase.	Value.	Percentage of Increase.	Value.	Percentage of Increase.	Number.	Percentage of Increase.
					£		£			
1899 - -	44	..	944	..	82,780	..	7,346	..	363	..
1900 - -	70	59	1,865	98	145,490	76	17,648	140	588	62
1901 - -	97	39	2,684	44	200,910	38	26,316	49	814	38
1902 - -	100	3	2,900	8	205,620	2	28,990	10	829	2
1903 - -	156	56	4,025	39	355,915	73	45,089	56	1,296	56
1904 - -	204	31	5,161	28	453,095	27	59,596	32	1,639	26
1905 - -	209	2	5177	..	452,080	..	64,327	8	1,747	7
1906 - -	274	31	6,538	26	608,060	35	96,588	50	2,347	34

* Including non-resident men. *N.B.*—The vessels returned include several mussel dredgers.

As will be seen from an examination of the above Table, there was an addition during the year of 65 vessels to the Scottish fleet of steam drifters and long liners, the ratio of increase—amounting to 31 per cent.—contrasting with that of 1905, when there was an addition of only 5 vessels, and corresponding with the ratio of increase of the preceding year, which year shows an excess of 48 vessels on the number returned for 1903. Compared with the figures of 1905, the actual increases in the tonnage and value of the vessels and the value of their fishing gear, amounted to 1361 tons, £155,980 and £32,261 respectively, and, as in the case of the number of vessels, exceeded the actual increases recorded for any year embraced in the Table.

In view of the increasing importance of steam drifting as a means of capture in the prosecution of the herring fishing, it may be of interest to peruse the following record of the operations of the majority of the district fleets:—

Buckie District.

The operations of the Buckie District fleet were attended with a greater measure of success than had been obtained during any year since the introduction of steam drifters into the district, the total gross earnings of the vessels being estimated at about a quarter of a million sterling. Seventy-eight per cent. of this amount is applicable to the Great Summer and English herring fishings, which yielded remarkable results, largely contributed to by the high prices secured for the fish. The West Coast early fishing was fairly remunerative; but only moderate returns were derived from the prosecution of the Stornoway winter fishing—a result, principally, of the stormy weather which prevailed. The fishing off the Irish coast again proved to be a failure, and, but for the fact that sums exceeding £200 were on frequent occasions realised for shots of 50 crans, the earnings would not have covered the expenses incurred.

Unmistakable evidence was afforded of the belief of the fishing community of the district in the future of steam drifters by the addition during the year of 33 vessels to the fleet, and by the conclusion of contracts for the building of new, or of negotiations for the purchase of second-hand, vessels—numbering, in the aggregate, 50—for delivery in 1907. Of the three materials employed in building the hulls of drifters, a preference is shown in the district for wood, it being considered that vessels so constructed possess better sea-going qualities and afford more comfortable quarters for the crews than vessels built of iron or steel. With a gradual increase in the size of the steam drifters acquired, there have, of course, been corresponding upward movements in the cost of their construction and the expense of their upkeep, the former amounting to £500 (from £2200 to £2700) in the case of wooden drifters, and the latter finding illustrations in increases of about £50 in accounts for coals, and of relative amounts in oil bills, insurance premiums, &c. The desire to possess a steam drifter of larger dimensions and greater speed than those of any in the neighbourhood has engendered among the fishermen a spirit of emulation similar to what formerly existed in regard to the Zulu sailing boat, and the gratification of this spirit may lead to disastrous results, in the event of the fishings during a season proving a failure, or even a catch of average dimensions being associated with low prices.

Findhorn District.

The earnings of the Findhorn District fleet exceeded those of any year since the adoption of steam drifters in the district, and, as was the case in 1905, by far the larger proportion of the earnings was made at the Great Summer and English herring fishings. The excess was not, however, the result of an increase in the catch of herrings, but is referable to the extremely high prices received.

It is expected—no doubt, to a large extent, as a consequence of the success obtained during the year—that, in the course of 1907, the existing fleet will be augmented by the addition of more than 20 vessels, a proportion of which, it is intended, shall be constructed in the district. This augmentation would be greater, but for, on the one hand, the difficulty experienced in disposing of the fishermen's sailing boats, and, on the other, the inability of the builders to undertake delivery of the vessels ordered before the expiry of nine or ten months.

Wick District.

Of the success met with during the year by the Wick District fleet, by far the larger proportion was gained in the prosecution of the Great Summer and English herring fishings, and that not so much as a result of the abundance of fish as of the high level at which prices were maintained.

As the earnings made at the winter herring fishing were small, and in previous years these had been scarcely large enough to meet the outlay incurred, the owners of several of the drifters contemplate laying up their vessels during the two months in which the fishing is prosecuted, viz., January and February.

Anstruther District.

Gratifying success was met with at the various herring fishings in which the Anstruther District fleet was employed, and the mean gross earnings realised were the highest recorded for the district. This success did not, however, extend to the prosecution of the line fishing, the results of which were unsatisfactory, although slightly less so than in the preceding year.

The average gross earnings at the Great Summer herring fishing amounted to £1045, or nearly three times as much as those of the district sailing boats—about £380; while there was an even greater disparity between the mean total earnings of the two classes of craft at the herring fishing off the English coast, those of the steam-driven vessels reaching £710, and those of the sailers amounting to only £200.

During the year four vessels were added to the fleet, and at its close orders had been given for the construction of about twenty, by crews belonging to Cellardyke, Pittenween, and St. Monance.

Helmsdale District.

Viewed as a whole, fairly good results were obtained from the operations of the nine steam drifters constituting the Helmsdale District fleet, but, considered in detail, the results were unequal.

In no instance were the earnings derived from participation in the winter herring fishing of sufficient amount to cover the outlay incurred; the prosecution of the West Coast herring fishing was not attended with success, and complete failure was met with at the early Shetland fishing.

On the other hand, fair earnings were secured in the case of three boats employed in the line fishing from January to April, and much success attended the operations of the fleet at both the Great Summer herring fishing and the fishing off the English coast. While neither of the two latter fishings yielded any takes of particularly large size, their prosecution—owing to the high prices obtained for fresh herrings—proved to be profitable alike for the owners of the vessels and the fishermen by whom they were worked.

Banff District.

In consequence of the success attending the operations of steam drifters in 1905, the number of vessels comprising the Banff District fleet was doubled during the year under review.

As obtained in the case of 1905, remarkably good results were yielded by the various herring fishings in which the fleet was employed. About two-thirds of the catch was secured off Shetland and the English coast, while the remainder was contributed by the Stornoway and East Coast fishings; and, although, in the case of the latter fishings, the quantities of herrings landed were relatively small, this fact was counterbalanced by the remunerative prices generally received. Indeed, the high level of prices constituted a feature of the year's operations.

Steam drifters are increasing in popularity in the district, and many of the fishermen, satisfied that their employment is necessary for the successful prosecution of the fishing under modern conditions, are arranging for acquiring them, and a much larger number would be ordered but for the difficulty experienced by the fishermen in disposing of their sailing craft.

Peterhead District.

The results of the operations of the steam drifters, compared with those of the sailing boats, belonging to Peterhead District afforded further evidence of the advantage conferred by the employment of steam in the prosecution of the fishing industry, more especially during calms or stormy weather, or where harbours are difficult of approach. In none of the fishings engaged in was this advantage more apparent than in the case of the fishing prosecuted off the English coast, more particularly from Yarmouth and Lowestoft. As a consequence of the success obtained at the various herring fishings, and the high prices realised, a decided impetus was given to the construction of steam drifters, the number of vessels under contract for local capitalists at the close of the year being estimated at not less than thirty. It is also worthy of note, as marking a further stage in the development of this branch of the industry, that efforts are being made outside the limits of the district to float a Company for the purpose of supplying vessels of this class to those fishermen who have little or no capital at their disposal.

First Quarter.

During the first three months of the year lines, as well as nets, were carried on board the majority of the vessels comprising the district fleet, but none of the former were employed excepting on those occasions on which herrings were found to be scarce. The area of operations was limited to the waters off the West Coast, and the larger proportion of the herrings taken was landed at Stornoway; but, although that port was also the landing place for a certain proportion of the line-caught fish, the best takes of these were forwarded to Aberdeen, where there was a more remunerative market.

In the earlier portion of the second quarter — during which period fishing was prosecuted only intermittently—marked success attended the operations of several crews who engaged in line fishing and landed the takes secured at Aberdeen. Fair results were also obtained by several crews at the Irish herring fishing, in operation during May, and moderate success by others at the herring fishings prosecuted from Castlebay, Stornoway, Orkney, and Shetland. The most remunerative fishing for herrings was, however, that engaged in from Peterhead during the month of June. Second Quarter.

Throughout the third quarter the herring fishing was carried on by all the district crews from Peterhead, except in the case of a small proportion whose takes during the first two months were landed in Shetland; and, as the prices obtained for the fish captured were high, the result was large earnings in the majority of instances. Third Quarter.

The entire fleet was employed at the English herring fishing, in the prosecution of which—carried on principally from Lowestoft and Yarmouth—remarkable success was obtained. As prices were maintained at a high level throughout the season at the various ports at which the fish were landed, the earnings were exceptionally good, the average amounting to as much as £956 per vessel, as compared with an average of £195 in the case of the sailing boats. Fourth Quarter.

The two vessels belonging to the district of Fraserburgh were supplemented during the year by a third, which was launched, however, only in time to admit of its employment at the English herring fishing. The operations of the three vessels were attended with much success, although, in the case of one of them, this success was unfortunately curtailed by the loss at Yarmouth of an entire drift of nets (with the herrings meshed in them) and a bush rope. In this connection, reference may be made to a belief prevalent among fishermen that the deterioration in drift nets used in conjunction with steam vessels proceeds at a much more rapid pace than what obtains in the case of nets employed on board of sailing boats. In estimating the value of this belief, the fact must, however, be kept in view that, in the former case, the nets are shot more frequently and allowed to drift for longer periods than in the latter. Fraserburgh District.

Prior to 1906 there was an evident disinclination on the part of the majority of the district fishermen to associate themselves with the acquirement of steam vessels, this disinclination being engendered by a hope that experts might be able to devise a relatively economical motive power capable of use as an auxiliary to the sails on board the boats at present owned by the fishermen —by far the larger proportion of which are of the highest class. During the year under review, however, a considerable number of the fishermen—impressed, no doubt, with the success of many of the steam drifters, and, at the same time, aware that this success had been obtained without the arduous labour inseparable from the working of sailing craft, with their heavy masts and canvas—began to realise the advantages accruing from the employment of steam, as compared with sails, in the prosecution of the fishing. The result was that orders were given for the construction of such a number of steam vessels as will, it is understood, raise the district fleet at the end of 1907 to twenty. This number would have been materially increased but for the fact of good sail boats—for which there is now little or no demand—being owned by so many of the fishermen, who are naturally disinclined to dispose of them for merely nominal amounts.

One of the disadvantages incidental to the employment of steam-driven vessels, in substitution for sailing boats, arises from the greater size of the former, the depth of water available in the harbours resorted to not being always sufficient to admit of their ready entrance and exit; and this fact supplies one of the principal reasons why the herring fishing is prosecuted from Shetland by means of so many steam drifters.

Year's Operations.

Through the courtesy of the owners of the vessels, it has been found possible to present, in the three following tables, the financial results per vessel of the operations of the majority of the district fleets employed during the year. Of these, Table I. gives the highest, lowest, and average earnings, the average expenses of maintenance and other outlay, and the surpluses remaining; Table II. institutes a comparison between the results obtained in 1906 and those of the preceding year; while in Table III. will be found particulars of the earnings at the various fishings engaged in:—

[TABLE.

TABLE I.

DISTRICT.	Steam Vessels Employed.		Men and Boys by whom Vessels Worked.		Average Number of Months in which Fishing engaged in.	Earnings per Vessel.			Average Working Expenses per Vessel.	Average Cost of Insurance, Allowance for Depreciation, &c., per Vessel.	Total Average Expenses.	Surplus Remaining.
	Average Number.	Average Value per Vessel.	Average Number.	Average Number per Vessel.		Highest.	Lowest.	Average.				
		£				£	£	£	£	£	£	£
Buckie	90	2,450	810	9	10	3,800	1,940	2,590	620	230	850	1,740
	11	2,450	99	9	5	2,900	656	2,000	310	115	425	1,575
Peterhead	48	2,600	436	9	12	3,965	1,516	2,764	614	435	1,049	1,715
Findhorn,	13	2,427	117	9	11	3,545	1,890	2,370	586	254	840	1,530
	2	2,350	18	9	4	1,900	1,700	1,800	320	90	410	1,390
	2	2,500	18	9	3	1,320	1,300	1,310	228	72	300	1,010
	2	2,500	18	9	2½	1,150	730	940	202	48	250	690
Anstruther	11	1,560	99	9	8	2,630	1,534	2,110	518	210	728	1,382
Wick	13	2,300	117	9	12	3,387	1,840	2,321	740	186	926	1,395
Banff	14	2,460	112	8	10	3,100	1,900	2,200	641	225	866	1,334
Helmsdale	8	1,805	72	9	11	2,665	1,660	2,201	626	176	802	1,399

N.B.—It should be explained (1) that the average working expenses given in the above Table embrace outlay for coals, engine-room and other stores, wages of engineer and fireman, docking and painting, maintenance of vessel (including machinery) and fishing gear (but excluding replacement of lost gear), harbour dues, salesman's commission, etc.; and (2) that the figures contained in the Table are largely estimates.

As has been stated in former Reports, in those instances where the fishermen are not the proprietors of the vessels worked by them they participate in the earnings derived from the prosecution of herring fishing to the extent of two-thirds, after meeting the working expenses, the fishermen in each instance supplying the nets, etc.

Statistics of the results of the operations of individual vessels have been omitted from the above Table.

TABLE II.

DISTRICT.	Year.	Average Number of Steam Vessels Employed.	Avge. Number of months in which Fishings Engaged in.	Average earnings per Vessel.	Percentage of average earnings per vessel absorbed by :—			Surplus Remaining.	Increase in Surplus in 1906 compared with 1905.
					Average Working Expenses.	Average Cost of Insurance, Allowance for Depreciation, &c.	Total Average Expenses.		
				£	Per Cent.	Per Cent.	Per Cent.	£	
Buckie	1905	58	11	2,200	26	11	37	1,380	619
	1906	87	11	2,932	23	9	32	1,999	
Peterhead	1905	44	12	2,491	24	19	43	1,405	310
	1906	48	12	2,764	22	16	38	1,715	
Findhorn	1905	13	11	1,970	29	12	41	1,170	567
	1906	15	11	2,594	23	10	33	1,737	
Anstruther	1905	10	8	1,676	30	13	43	954	428
	1906	11	8	2,110	25	10	35	1,382	
Wick	1905	15	12	1,944	38	9	47	1,025	370
	1906	13	12	2,321	32	8	40	1,395	
Banff	1905	7	10	2,240	22	11	33	1,492	-158
	1906	14	10	2,200	29	10	39	1,334	
Helmsdale	1905	7	11	2,064	39	11	50	1,032	367
	1906	8	11	2,201	28	8	36	1,399	

N.B.—For the purpose of the comparisons drawn in the above Table, a combination has been made of certain of the figures appearing in Table I.

TABLE III.

DISTRICT.	Steam Vessels Employed.	Men and Boys by whom Vessels worked.		Fishings Engaged In.		Earnings, per Vessel.		
	Number.	Number.	Number per Vessel.	Nature.	* Duration.	Highest.	Lowest.	Average.
						£	£	£
Buckie	75	675	9	Winter Herring and Great Line Fishing.	From 1st January to 31st March.	690	208	270
	90	810	9	Early Summer Herring Fishing.	From 1st April to 30th June.	632	245	320
	95	855	9	Great Summer Herring Fishing.	From 1st July to 30th September.	1,715	760	1,050
	101	909	9	English Herring Fishing.	From 1st October to 31st December.	1,610	656	950
Peterhead	35	315	9	Net and Line Fishing.	From 1st January to 31st March.	552	130	320
	52	468	9	Do. do.	From 1st April to 30th June.	863	322	585
	53	477	9	Great Summer Herring Fishing.	From 1st July to 30th September.	2,176	795	1,243
	54	486	9	English Herring Fishing	From 1st Octoober to 31st Dec.	1,482	749	956
Findhorn	13	117	9	Winter Herring and Great Line Fishing.	From 1st January to 31st March.	400	210	270
	13	117	9	Net and Great Line Fishing.	From 1st April to 30th June.	460	100	210
	15	135	9	Great Summer Hering Fishing.	From 1st July to 22nd September.	1,200	700	810
	19	171	9	English Herring Fishing.	From 24th September to 10th December.	1,438	720	1,080
Anstruther	1	9	9	Winter Herring Fishing.	From 12th to 31st March.	313	313	313
	12	108	9	Great Line Fishing.	From 5th April to 30th June.	711	250	448
	13	117	9	Summer Herring Fishing.	From 1st July to 22nd Sept.	1,659	800	1,045
	14	126	9	English Herring Fishing.	From 1st October to 5th December.	1,303	493	710
Wick	13	117	9	Winter Herring Fishing.	From 1st January to 31st March.	240	96	150
	13	117	9	Early Summer Herring Fishing.	From 10th May to 15th June.	290	126	200
	13	117	9	Great Summer Hering Fishing.	From 1st July to 31st Aug.	1,270	800	1,016
	13	117	9	English Herring Fishing.	From 1st October to 12th December.	1,300	630	955
Banff	14	112	8	Herring Fishings.	8 months.	1,160	1,150	1,338
	14	112	8	English Herring Fishing.	2 months.	1,940	750	862
Helmsdale	3	27	9	Line Fishing.	From January to April.	478	242	381
	5	45	9	Herring Fishing.	Do. do.	441	23	245
	9	81	9	Do. do.	From May to September	1,529	816	1,119
	9	81	9	English Herring Fishing.	From October to December.	1,060	605	783

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* Ten or eleven days are occupied in preparing for each herring fishing.

From an examination of Table II. it will be seen that, except in the case of the Banff District fleet, the operations of the steam vessels brought under review were more remunerative in 1906 than in the preceding year, the margins of net profit per vessel available for distribution among the owners of the other district fleets showing increases reaching a mean level of £443, and ranging in amount from a minimum of £310 to a maximum of £619. It will also be found that this greater measure of financial success is not entirely accounted for by increases in the average earnings—which were due, in a large degree, to the high prices received for the herrings captured—but, to a certain extent, to reductions — in some instances, of considerable amount—in the percentages of those earnings which were absorbed in working and other expenses.

Experiment with Turbine Engine.

The annual report for Anstruther District contains (*vide* Appendix M, p. 237) a reference to an experiment of much interest to fishermen, more especially to those of them who, although desirous of acquiring steam drifters, are naturally unwilling to dispose of the expensive sailing boats at present owned by them at merely nominal prices. During the year a turbine engine was fitted into a sailing boat with the double object of ascertaining the rate of speed at which it was capable of driving the craft during calm weather and the access of speed which would accrue from its use in supplement to that of the sails during light winds. As a result of several trials it was found that, under the first condition, a speed of 6½ knots per hour was attainable, while, under the second, a speed of 5 knots yielded by the employment of the sails was doubled by the supplementary use of the engine. As the season was far advanced before the completion of the installation the utility of the engine was not further tested by the employment of the boat in the prosecution of the fishing.

Annual Values of Nets and Lines.

The movements in the annual values of drift netting and great lines on the East Coast which are traced in an accompanying chart serve to show, on the one hand, the decline in line fishing by means of sailing boats, and, on the other hand, the increase in the employment of steam vessels in fishing with lines and drift nets.

Subject to an exception in the case of 1895, there was a continuous decline during the period covered by the chart in the annual values of great lines employed on board of sailing boats, representing an aggregate fall of 44 per cent.—from £36,137 to £20,116.

Although the advances in the annual values of drift netting used on board of steam vessels were uninterrupted, they were of unequal extent, ranging from £1763 in 1905, when only five vessels were added to the fleet, to £23,223 in the following year, when the fleet was augmented to the extent of 65 vessels.

III. Beam and Otter Trawl Vessels.

Further Development in Industry.

Compared with the figures of 1905 the returns relative to beam and otter trawlers show increases of 10 in the number of vessels comprising the Scottish fleet, 756 tons in their tonnage, £56,575 in their value (including the value of their fishing gear), and 295 in the number of men employed in working them. Those increases are accounted for principally by additions to the fleet belonging to the district of Aberdeen, which now numbers 166 vessels, of the gross value (including value of fishing gear) of £699,000.

Net Manufactories and Ice Factory.

It is interesting to note, in connection with the development of the trawling industry, a statement (*vide* Appendix M, p. 236) in the annual report of the Fishery Officer of Leith District to the effect that, during the year, two net manufactories, capable of providing employment for 80 women, and an ice factory had been built at Leith by owners of trawl vessels belonging to that port and fitted up by them with machinery of the most modern type.

FISH LANDED.

I. Total Catch.

Quantity and Value compared with 1905. (App. B., No. 1, p. 161.)

The total quantity and value of fish landed in Scotland (exclusive of shell-fish) during the year 1906 was 7,593,369 cwts., valued at £2,977,593, the catch thus showing a decrease of 262,941 cwts., but the value an increase of £328,445. The falling-off in the quantity landed was more than accounted for by the decline in the catch of herrings, (there being a net increase of about 100,000 cwts. under other headings), but, notwithstanding, over 93 per cent. of the improvement in value fell to be credited to the same species. Towards the gross catch herrings and other net-caught fish contributed 66 per cent., trawled fish 25 per cent., and line fish about 9 per cent., these proportions showing little variation from those of 1905; while, as regards value, the corresponding percentages were 56, 32, and 12. The average price obtained was 7s. 10d. per cwt., as compared with 6s. 9d. in 1905 and 5s. 7d. in 1904, the improvement being due mainly to the high prices received for herrings. The total value of shell-fish landed in 1906 amounted to £72,322, as against £70,662 in the preceding year, the increase being referable to the improvement in the crab, mussel, and oyster fisheries. The gross total value of all kinds of fish landed was thus £3,049,915, or over 12 per cent. in advance of the preceding year's figures. When it is recollected that the total value of the catch for 1905 had never previously been exceeded, it must be admitted that the new record created in 1906 says much for the prosperity of the Scottish fisheries.

Returns of Shell-Fish.

II. Fish Taken by Nets.

(*a*) *HERRINGS.*

Decrease in Catch, but Increase in Value.

As in 1905 and 1904, the catch of herrings was a very large one, though it fell somewhat short of the great catches in these two years. The gross landings amounted to 4,979,848 cwts., or nearly 7 per cent. less than in the preceding year, the decline in the catch being accounted for by a decrease (in the ratio of about 5 to 1) in the quantities landed during the great summer and winter fishings, counterbalanced to a considerable extent by the improvement in the early summer fishing. Fortunately, from the fishermen's point of view, the falling-off in the quantity landed was not reflected in the total value received by them. High prices ruled, especially during the great summer and winter fishings, with the result that the total earnings reached the unprecedented total of £1,649,163 or nearly 23 per cent. in advance of the total value for 1905, which, in its turn, was almost 32 per cent. higher than that obtained for the record catch of 1904. Towards the increase in the total value, the great summer fishing contributed about 62 per cent. and the early summer fishing over 34 per cent. Of the total landings, the East Coast contributed over 54 per cent., Orkney and Shetland about 35 per cent., and the West Coast the remainder, while, in respect of value, the corresponding percentages were 49, 39, and 12. The higher relative prices thus indicated for Orkney and Shetland were attributable in a great measure to the greater number of steam drifters employed in these districts—vessels which, of course, are able to get to market earlier than sailing vessels, and with the fish in better condition. Of individual contributors, Shetland District, with a catch of over 1,600,000 cwts., again easily took first place, the next in order being Fraserburgh and Peterhead, each with considerably less than half that quantity. Other prominent contributors on the East Coast were Wick and Aberdeen, while, on the West Coast, Stornoway and Barra were accountable for nearly 63 per cent. of the landings.

Distribution of Catch and Value.

Principal District Contributors.

Summing up the results of the herring fishing for 1906, it may be stated that it was very satisfactory to the fishermen and shore-workers (especially the gutters and packers), but that, with a falling market towards the close of the season, the curers may not have found the year so remunerative as they could have desired.

Summary of Results.

Great Summer Herring Fishing.

This, the most important of the three great herring fishings, covers the period from 1st July to 31st December. In the year under review the fishing was a successful one, for, although the catch of 3,421,285 cwts. fell short of that of 1905 by over 635,000 cwts., the total amount realised—£1,217,901—was over £189,000 in advance of that of the preceding year. The falling-off in the catch was referable almost entirely to Orkney and Shetland, for a slight decrease on the West Coast was more than counterbalanced by an increase on the East Coast; while the bulk of the large increase in value fell to the East Coast districts, and was attributable not alone to the facts that fish were plentiful and prices higher than in 1905, but also to the fact that, owing to the comparative failure of the fishing on the west side of Shetland, a larger fleet than usual assembled in the earlier portion of the season. As this fishing is prosecuted mainly on the East Coast and in Orkney and Shetland, these sections contributed the bulk of the catch. As already indicated, the Shetland fishing was not so successful as in the preceding year, so that instead of furnishing, as it did in 1905, nearly half the total summer catch, it contributed little more than one-third. The most successful districts on the East Coast were Fraserburgh, Peterhead, Aberdeen, Wick, and Eyemouth, which together were credited with 90 per cent. of the catch, but of these only Aberdeen and Eyemouth showed improved results as compared with 1905.

Quantity and Value.

Distribution of Catch and Value.

Sailing Vessels v. Steam Drifters.

As in the three preceding years, frequent calms (especially during July and the first week of August) hindered fishing operations, the disadvantage being particularly felt by the sailing boats working from Aberdeenshire ports. The recurrence in recent seasons of these calms has impressed the fishermen more and more with the advantages of steam drifters, and the practical cessation in the construction of these vessels during 1905, following upon the comparatively poor earnings in 1904 (notwithstanding the record catch) was not repeated in the year under review. In 1906, no fewer than 65 steam drifters were added to the fleet; but to obtain an adequate idea of the progress made in the use of steam for herring boats reference should be made to the Table in the "Means of Capture" article (p. xv.). In the same article, interesting particulars of the working of the majority of the district fleets of steam drifters are given, and, in this connection, special reference should be made to Tables I., II., and III. embodied in the article.

Average Prices.

On the East Coast, the average price per cran was 22s. 7d., against 16s. 8d. in 1905; in Orkney and Shetland it was 28s. 6d., against 18s. 4d.; and on the West Coast 22s. 10d., against 21s. 6d.

Early Summer Fishing.

Development of East Coast Fishing.

As indicated in previous Reports, the early summer herring fishing was formerly prosecuted mainly on the West Coast and in Orkney and Shetland. A few years ago, however, the East Coast began to occupy a more prominent position, and in 1904, for the first time on record, it actually surpassed the West Coast in its catch. The movement thus begun was continued during the year 1905, while, in the year under review, the East Coast catch was not only over three times as great as the West Coast catch, but actually exceeded by over 50 per cent. the landings in Orkney and Shetland, which have long been by far the most important contributors to the early summer returns. In order to show the change which has taken place, it may not be uninteresting to exhibit in tabular form the landings for the five years 1902-6 in each of the three sections into which Scotland is divided for the purposes of the returns.

STATEMENT showing the Quantity of Herrings Landed on the East Coast, in Orkney and Shetland, and on the West Coast during the Five Years 1902-1906.

Year.	East Coast.	Orkney and Shetland.	West Coast.	Total.
	Cwts.	*Cwts.*	*Cwts.*	*Cwts.*
1902	68,679	399,618	267,968	736,265
1903	141,282	353,939	240,417	735,638
1904	220,155	305,831	187,342	713,318
1905	210,090	437,032	160,369	807,491
1906	618,578	407,100	178,926	1,204,604

An examination of these figures shows at once the revolution which has occurred. In 1902 the East Coast contributed less than 10 per cent. of the total catch; in 1903 the proportion rose to nearly 20 per cent., and in 1904 to over 30 per cent.; and, although there was a slight recession in the proportion for 1905, in 1906 it rose to over 50 per cent. In explanation of the change thus exhibited, it may be stated that it has been due mainly to the comparative failure of the West Coast fishing, especially in June, which has induced the East Coast fishermen to return earlier than usual, and in the year 1906 there was added to this cause the failure of the fishing on the west side of Shetland. The total value of the early summer catch was £314,709, or little short of 50 per cent. in advance of the figures for 1905, which corresponded almost exactly with the relative increase in the catch. The East Coast contributed almost 43 per cent. of the value, the West Coast over 25 per cent., and Orkney and Shetland 32 per cent. As the corresponding percentages of the catch were 51, 15, and 34, it will be seen that the West Coast herrings produced the highest prices, this being accounted for by the great esteem in which the herrings landed at Barra (amounting to over 70 per cent. of the West Coast catch) are held in the Russian markets.

Distribution of Catch and Value.

Winter Herring Fishing.

Decrease in Catch, but Increase in Value.

The winter herring fishing, which is pursued almost wholly on the East Coast and the West Coast, was, in so far as quantity is concerned, not so successful as in the preceding year, the total landings being 353,959 cwts. as against 478,988 cwts. The shortage thus exhibited was roughly divisible between the two sections referred to in the ratio of 5 to 8. On the East Coast it was mainly due to the comparative failure of the Firth of Forth fishing owing to scarcity of herrings on the usual grounds in the earlier portion of the season; while, on the West Coast, the falling-off was very largely attributable to the fact that the quite exceptional fishing in Loch Broom in 1905 (yielding over 66,000 cwts.) was not repeated in 1906, when only 90 cwts. were landed. If, however, the decline in the winter catch in 1906 was cause for regret to some of those engaged in the industry, the fishermen as a whole could not complain, for the reduced catch realised £116,553, or £12,616 more than in the preceding year. Most of this increase went, appropriately enough, to Anstruther fishermen, in which district (if we exclude the exceptional case of Loch Broom) the falling-off in the catch was greatest, and was due to the keener competition probably induced by the shortage in the catch.

(b) SPRATS, SPARLINGS, AND MACKEREL.

Sprats.

Sprat fishing was, as usual, confined to the Firths of Forth and Tay and the Inverness and Beauly Firths. The total catch amounted to only 5532 cwts., or less than half the catch in the preceding year. This was referable almost wholly to the complete failure of the fishing in the Firth of Tay and the partial failure in the Inverness and Beauly Firths, and was due to the scarcity of the fish on the usual grounds. The total value amounted to £1994, or 30 per cent. less than in the preceding year, so that the decline in value was not so great as in the case of the catch—a fact largely attributable to the competition of foreign curers at Inverness.

Sparling.

Sparling fishing is confined mainly to the Firths of Forth and Tay. The total catch in 1906 was 271 cwts., valued at £539, as compared with 577 cwts. and £951 in 1905.

Mackerel.

Mackerel fishing as a distinct industry is prosecuted only in certain districts on the West Coast, the fish landed elsewhere in Scotland being obtained incidentally in herring nets. The total catch in 1906, was 30,569 cwts., valued at £9482, as compared with 19,741 cwts. and £5550. Practically the whole of the increase in the catch was referable to the West Coast (especially to Loch Carron and Skye and Stornoway districts), and there seems little doubt that a mackerel fishery is being surely, if slowly, established on the West Coast. Particulars of the attempts being made to develop the fishery will be found in Appendix P, p. 285, and in the corresponding Appendix P. in the Report for 1905 (p. 234).

III. Fish Taken by Lines and Trawls.

(a) *ROUND FISH.*

Comparison of Results with 1905.

The grand total quantity of round fish landed in 1906 was 2,284,368 cwts., valued at £1,004,824, the quantity being nearly 102,000 cwts. in excess of the preceding year's total, but the value practically the same. Both quantity and value are the highest on record for this class of fish. Unfortunately, however, the line fishing continues to show a decline, the catch being less than half of what it was ten years ago. In the year under review it was, however, some solatium to the line fishermen that their reduced catch realised over £7000 more than in 1905. Of the total catch the East Coast contributed 90 per cent., Aberdeen with 67 per cent. thereof holding a preponderating position, while the remainder was divided between Orkney and Shetland and the West Coast in the ratio of about 6 to 5. As regards value, the East Coast accounted for 91 per cent., Orkney and Shetland for 4 per cent., and the West Coast for the remainder. From the point of view of methods of capture, trawling was credited with 74 per cent. of the catch and 72 per cent. of the value, as compared with 72 per cent. and 73 per cent. respectively in 1905.

Continued Decline of Line Fishing.

Haddocks.

Record Catch —attributable to Trawlers.

Of round fish, haddocks are the most important contributors to the food supply. The total catch in 1906 was 1,074,515 cwts., the highest ever recorded, and equal to an increase on the preceding year's total of over 15 per cent.; and it is pleasing to note that the increase was contributed to by liners as well as trawlers—in the ratio of about 2 : 5. Trawlers contributed 868,347 cwts. to the catch (or nearly 81 per cent. of the total), and of this quantity nearly 70 per cent. was referable to Aberdeen district, and most of the remainder to Leith. These two districts are naturally also credited with the increase in the trawled catch, amounting to over 13 per cent. as compared with 1905. As regards the line catch, the principal contributors, in order, were Montrose and Aberdeen, followed by the districts on the south shore of the Moray Firth, and, generally speaking, these were also the districts which accounted for the bulk of the increase in the line catch, although a fair improvement was also exhibited in the Stornoway returns. The increased landings were accounted for by the fact that haddocks were more plentiful than usual on the customary fishing grounds.

Decline in Value of Trawled Catch but Increase in Value of Line Catch.

The total value of the haddocks landed amounted to £521,914, as compared with £528,950 in 1905, so that the increase in the landings did not prove of any corresponding benefit to the fishermen. In this connection, however, it is worthy of note that the loss fell entirely upon the trawlers, whose increased catch (by over 100,000 cwts.) realised nearly £24,000 less than in the preceding year; the line catch, on the other hand, brought nearly £17,000 more than in 1905. The decline in the value of trawled haddocks is more than accounted for by the Aberdeen returns, and may be explained by the facts that the very warm weather during the summer months and the landing of large quantities of small Icelandic haddocks during the same period reduced prices to an exceptionally low level, considerable quantities, indeed, having to be sold as manure. The increase in the value of the line catch was largely attributable to the East Coast, nearly all the districts participating in the improvement, though Montrose, Anstruther, Findhorn, and Leith were credited with the greatest proportions.

Cod.

The total catch of cod in 1906 was 720,271 cwts., valued at £322,113, these figures showing increases of 6 per cent. and 8 per cent. respectively on the 1905 returns. Of the gross landings and value, trawled cod accounted for 68 per cent. and 66 per cent. respectively, these proportions being somewhat greater than in the preceding year. Aberdeen with more than three-quarters and Leith with over one-seventh of the trawled catch were the most important contributors, while as regards the line returns the East Coast accounted for about seven-elevenths of the total catch (Aberdeen and Wick being the outstanding districts), Orkney and Shetland for about one-fifth, and the West Coast for the remainder.

It is regrettable that, although there was an increase in the gross catch and value of cod, this improvement was not shared in by the line fishermen. On the contrary, the landings of the latter showed a decrease of nearly 21,000 cwts., while the value was nearly £2000 less as compared with 1905. It may be pointed out, however, that the decline in the catch was confined wholly to the East Coast (the other sections showing increases), and was, to no small extent, due to the fact that great-line fishing is not now so vigorously prosecuted as formerly, the fishermen preferring to follow the herring fishing all the year round.

Ling.

The continued improvement in the ling fishing noted in last Annual Report was not maintained in the year under review, the catch of 131,457 cwts. being about 13 per cent. and the value (£43,875) about 8 per cent. lower than in 1905, though the landings were practically identical with those of 1904, and the value somewhat higher than in that year. Line fishing still holds an advantage over trawling in the capture of ling (though the gap between the catches is rapidly diminishing), and in the year under review was credited with nearly 55 per cent. of the catch and over 61 per cent. of the value. The whole of the decline in the catch and value was referable to line fishing, as the trawl landings showed a slight increase. Most of the falling-off in the catch occurred on the East Coast (the other two sections together contributing only about one-third of it), and was probably due to the same causes which operated in the case of cod. The bulk of the line catch was referable to Aberdeen and Stornoway districts, which respectively contributed 58 per cent. and 24 per cent. of the landings, while Aberdeen accounted for over 92 per cent. of the trawled catch.

Chart showing Prices of Haddocks, Cod, and Ling for 14 Years.

In an accompanying chart there are traced, for the period from 1893 to 1906, inclusive, the annual prices per cwt. of the three more important species of round fish, viz., haddocks, cod, and ling, taken by means of lines and trawls and landed in Scotland.

With one exception the prices obtained for trawled haddocks exceeded those secured for haddocks taken by line from 1893 to 1897, inclusive, after which the line-caught haddocks commanded the higher prices. The line prices ranged from 8s. 3d., obtained in 1895, to 14s. 6d., the level reached in 1901; while 8s. 1d. represented the minimum trawl price, secured in 1895, and 12s. 10d. the maximum, attained in 1900. The excesses in line over trawl prices in a given year ranged from 2d., the amount brought out in the case of 1895, to 2s. 10d., the excess in 1903; while the excesses in trawl over line prices varied from 2d. to 1s. 9d.

Up to and including 1897 the prices obtained for trawled cod were higher than those secured for cod taken by lines—the excesses ranging from 2d. to 2s. 4d. per cwt.—but thereafter, excepting in the cases of 1900 and 1901, when the trawl were 9d. in advance of the line prices, there was a more remunerative market for line-caught cod, the excesses varying between a minimum of 2d. and a maximum of 1s. 7d. During the period reviewed the line prices ranged from 6s. 7d. to 10s. 1d., and the trawl prices from 6s. 9d. to 9s. 11d.

As regards ling, in the first six years the prices per cwt. of those taken by trawl showed a premium, but the position was reversed during the remainder of the period, excepting in 1901, when line and trawl prices were equal. The prices of line-caught ling ranged from 5s. 2d. to 7s. 6d., and those of trawled ling from 5s. 5d. to 8s.

11d.; while the amounts by which line exceeded trawl prices varied between 1d. and 1s. 10d., and the variation in the excesses shown in trawl prices extended from 5d. to 2s. 10d.

Over the period brought under review the following represent the average line prices per cwt. secured :—Haddocks 10s. 4d., cod 8s., and ling 6s. 3d.; while the corresponding average trawl prices amounted to 10s. 7d., 8s. 6d., and 6s. 1d.

Whitings.

Like other branches of the white fishing, that for whitings has been characterised in recent years by the great and rapid increase in the catch by trawlers concurrently with a great decrease in that by liners. Only eight years ago line fishing accounted for about three-fifths of the total landings, but in the course of a few years the position was reversed, and, in 1906, of a total catch of 147,617 cwts., the trawlers were credited with no less than 81 per cent. As regards value, however, the trawled fish did not occupy quite so prominent a position, 74 per cent. representing the proportion realised by them. The smaller prices brought by trawled whitings were due to the fact that the fish were sold in wholesale quantities at the few trawling ports, while line-caught whitings were landed in comparatively small quantities throughout all the fishery districts, and were often retailed or hawked in the localities where landed. Aberdeen and Leith, in the ratio of about 2½ to 1, furnished 96 per cent. of the trawled catch.

Saithe, Torsk, and Conger Eels.

The total catch of saithe in 1906 was 115,365 cwts., valued at £22,733, these figures representing decreases of 11 per cent. and 2 per cent. respectively from the returns for 1905. The line catch and value amounted to 41,638 cwts. and £7932 respectively, as compared with 49,144 cwts. and £8190 in the preceding year, the decline being referable to the East Coast and (especially) Orkney and Shetland. Over 94 per cent. of the trawled catch was landed at Aberdeen, whose returns for this fish, however, are nearly 5000 cwts. less than in 1905. Torsk are landed chiefly by liners, only about one-sixth of the catch and value of 10,974 cwts. and £2822 respectively being accounted for by trawlers in the year under review. The principal contributor to the line catch was Aberdeen with almost two-thirds of the landings, while the same district returned practically the whole of the trawled catch. Conger eels are also caught almost entirely by lines, and of the total catch and value, amounting to 15,299 cwts. and £7647 respectively, about 80 per cent. in each case was referable to West Coast districts—chiefly Fort-William and Stornoway. The catch shows a decline of 17 per cent. and the value a decline of 3 per cent. from the preceding year's returns.

Gurnards, Cat-fish, Monks (Anglers), and Hake.

Gurnards, cat-fish, and anglers are of little importance as contributors to the food supply, although in recent years attempts to place them on the market cured in fillets have met with considerable success. The aggregate catch of these three species in 1906 was 43,495 cwts., or about 3000 cwts. more than in 1905, while the value (£10,170) exceeded the preceding year's total by over £1000. Practically the whole of the catch was landed by trawlers at East Coast trawling ports, principally Aberdeen. The total quantity of hake landed was 25,375 cwts., valued at £16,106, as compared with 34,220 cwts. and £16,595 in 1905. While, therefore, the catch (which was almost entirely landed by trawlers at Aberdeen) showed a considerable decrease, there was little variation in the gross value realised.

(b) FLAT-FISH.

The total quantity of flat-fish landed during 1906 was 183,927 cwts., valued at £279,911, these figures representing a decrease in quantity to the extent of 4470 cwts., but an increase in value of no less than £16,087. Towards the decline in the catch both line fish and trawl fish contributed in the ratio of about 7 to 4, while their respective contributions towards the increase in value were in the ratio of 1 to 4. Trawlers contributed nearly 75 per cent. of the total catch and about 80 per cent. of the value, these proportions showing little variation from those of the preceding year.

Plaice.

From the point of view of the food supply, plaice are the principal kind of flat-fish landed. The total catch in 1906 was 58,830 cwts., valued at £80,251, there being an increase of about 4½ per cent. in the quantity and of about 4 per cent. in the value as compared with the figures for 1905. Over 83 per cent. of the catch was landed by trawlers, while the proportion of their value amounted to nearly 90 per cent., the higher relative price thus indicated for trawled fish being due mainly to the greater competition and the greater facilities for distribution at trawling ports. The great bulk of the trawled catch was landed at Aberdeen and Leith, which conjointly contributed about 91 per cent. of the quantity and 93 per cent. of the value. As regards the line catch, almost the whole of it, in the ratio of 3 to 1, was landed on the East and West Coasts, Anstruther, Cromarty, Helmsdale, and Montrose in the former division, and Ballantrae in the latter being the chief contributors.

Flounders.

Flounders, unlike the other smaller types of flat-fish, are caught chiefly by lines, and of the total catch of 14,953 cwts., this method accounted for over three-fifths. As regards value, however, line-caught flounders realised rather less than one-half of the total of

£11,296, the smaller prices realised being due to the same causes which operated in the case of plaice. As in the preceding year, Leith, Wick, and Findhorn districts contributed the bulk (86 per cent.) of the East Coast line catch (5768 cwts.), while nearly one-half of the West Coast returns (3435 cwts.) were referable to Stornoway District. Leith and Montrose districts contributed practically the whole of the trawl landings, only a very small proportion being landed by sailing beam trawlers in Ballantrae and Rothesay districts. Comparing the results with those of the preceding year, it appears that there was a decline in the catch and value of 2353 cwts. and £1645 of which trawlers were responsible for about one-fifth and nine-sixteenths respectively.

Witches and Megrims.

In 1906 witches were landed almost solely by trawlers, and almost entirely—to the extent of over 94½ per cent.—at Aberdeen. The total catch amounted to 16,707 cwts., valued at £23,881, as compared with 22,657 cwts. and £23,811 in 1905, so that, although there was a considerable decrease in the quantity, prices were so much higher that the total sum realised was rather greater than in 1906. Megrims are landed entirely by trawlers, and, like witches, almost entirely at Aberdeen. The total catch and value in 1906 were 10,708 cwts., valued at £10,374, these results showing slight decreases from the preceding year's returns.

Dabs and Brill.

The total catch of dabs in 1906 amounted to 6478 cwts. valued at £2728, these figures differing but little from the preceding year's totals. About three-fifths of the catch was landed by trawlers, chiefly at Leith and Aberdeen, but liners are credited with rather more than half the value. As will be observed from a comparison of the quantity and value with the corresponding figures for other flat-fish, dabs are not a highly esteemed article of food, this being attributable to their smaller size and poorer flavour as compared with other species. Brill are landed only in small quantities at Scottish ports, and the total catch amounted to but 1038 cwts., valued at £1666, practically the whole catch, in the ratio of 2 to 1, being landed by trawlers in Leith and Aberdeen districts.

Halibut.

Halibut are at present caught chiefly by steam liners, which accounted for about seven-twelfths of the total catch of 36,686 cwts., while trawlers landed more than four-twelfths and sailing liners the remainder. The bulk of the line catch is landed at Aberdeen, which so many steam liners now make their headquarters. and here, also, nearly three-quarters of the trawl catch is brought to market, Leith being the only other contributor of importance. The catch for 1906 was about 1100 cwts. greater than in 1905. As regards value, the total realised was £65,796. or over £7300 in advance of the preceding year's return, both liners and trawlers, in the ratio of about 9 to 10, sharing in the increase.

Lemon Soles.

Lemon soles are landed almost entirely by trawlers. In the year 1906 the total catch was 32,828 cwts., valued at £65,722, these figures representing increases of 6 per cent. and 19 per cent. respectively on the returns for 1905. Aberdeen, Leith, and Montrose districts, in the ratio of 9 : 6 : 1, contributed the great bulk of the catch, but the Aberdeen fish realised nearly twice as much per cwt. as the Leith fish, this being due probably to the better quality of the soles landed and to keener competition among the buyers.

Turbot.

Like lemon soles, turbot are obtained almost wholly by trawlers. The total catch amounted to 5699 cwts., valued at £18,197, as compared with 6475 cwts. and £21,313 in 1905. Aberdeen and Leith, in the ratio of 3 to 2, contributed the great bulk of the catch, and the whole of the falling-off was referable to Leith district. Turbot are a highly esteemed fish, but are comparatively scarce, and these facts account for the high price of £3 3s. 10d. realised per cwt., as compared with £2 per cwt. for lemon soles and £1 15s. 10d. per cwt. for halibut.

(c) SKATES AND RAYS, SQUIDS, AND UNCLASSIFIED FISH.

Skates and rays are still landed chiefly by liners (chiefly steam liners), and in 1906 these vessels secured about 57 per cent. of the catch (97,375 cwts.) and 63 per cent. of the value (£28,095). Aberdeen and Leith, in the ratio of 12 to 1, contributed practically the whole of the trawl landings; while Aberdeen and Stornoway, in the ratio of about 3 to 1, accounted for about 71 per cent. of the line catch, the only other outstanding district being Fort-William with about one-half of the Stornoway return. As compared with 1905, the catch shows a decrease of about 3000 cwts., due to a decline in the line landings of about 6000 cwts. and an increase in the trawl returns of 3000 cwts. Notwithstanding the decrease in quantity, however, the total value shows an increase of about £2500, referable chiefly to Aberdeen and Fort William districts.

Squids in this country are used entirely for bait. The total quantity landed in 1906 was 2758 cwts., valued at £1938 as compared with 1993 cwts. and £1380 in 1905, and the landings were made by trawlers, chiefly at Aberdeen and Leith.

"Unclassified fish" consist chiefly of sillocks and lythe. In 1906, the total landings amounted to 8721 cwts., valued at £1647, these figures showing increases of about 600 cwts. and £300 respectively on the returns for 1905. About three-fifths of the catch was landed by liners, and these vessels accounted for about the same proportion of the value.

The following Table shows the catch and value of fish (exclusive of shell-fish) taken by the different methods of fishing since 1897 inclusive.

Statement of Catch and Value for 10 Years.

Years.	(1) * Herrings, etc.			(2) † Round-Fish.					
	Net.			Line.			Trawl.		
	Cwts.	£	Price per Cwt.	Cwts.	£	Price per Cwt	Cwts.	£	Price per Cwt.
1897	2,992,090	714,067	4/9	1,276,702	492,103	7/8	499,259	229,506	9/2
1898	4,715,237	956,442	4/1	926,257	398,912	8/7	661,314	322,780	9/9
1899	3,222,901	1,149,823	7/2	810,224	371,865	9/2	816,410	429,929	10/6
1900	3,534,767	1,251,394	7/1	650,005	304,837	9/5	891,975	512,803	11/6
1901	4,360,303	1,071,391	4/11	572,802	261,103	9/1	1,093,730	593,114	10/10
1902	4,789,448	1,369,580	5/9	501,708	248,159	9/11	1,253,167	602,290	9/7
1903	4,349,835	1,255,400	5/9	511,737	249,107	9/9	1,342 586	578,981	8/8
1904	5,488,456	1,028,160	3/9	628,898	279,428	8/10	1,520,949	618,687	8/1
1905	5,375,225	1,352,421	5/	619,194	274,754	8/10	1,563,247	729,822	9/4
1906	5 016,220	1,661,178	6/7	601,033	282,144	9/5	1,683,335	722,680	8/7

Years.	(3) ‡ Flat-Fish.						(4) § Skates, Squids, and Unclassified Fish.					
	Line.			Trawl.			Net and Line.			Trawl.		
	Cwts.	£	Price per Cwt.	Cwts.	£	Price per Cwt.	Cwts.	£	Price per Cwt.	Cwts.	£	Price per Cwt.
1897	112,957½	72,068	12/9	71,808¾	108,454	30/2	26,578	5,860	4/9	22,277	5,696	5/1
1898	111,554¾	66,543	11/6	84,275¾	120,572	28/7	21,282½	4,736	4/5	37,847	9,881	5/2
1899	114,361	64,406	11/3	119,03	155,311	27/3	14,777	3,580	4/10	53,368	15,019	5/8
1900	97,035	63,733	13/2	129,550	167,569	25/10	10.376	2,603	5/–	55,557	23,055	8/4
1901	110,770	78,036	14/1	157,374	203,640	25/11	12,447	2,753	4/5	77,744	28,273	7/3
1902	97,247	67,908	14/-	118,989	188,719	31/9	9,795	2,241	4/7	68,310	23,771	7/-
1903	82,059	64,591	15/9	165,085	232,053	28/1	8,807	2,257	5/2	58,699	18,898	6/5
1904	120,211	80,703	13/5	180,709	221,212	24/6	4,631	1,054	4/7	1,910	435	4/7
1905	111,041	72,961	13/2	177,472	216,443	24/1	5,419	895	3/4	2,719	472	3/6
1906	46,431	59,644	25/8	137,496	220,267	32/	61,388	18,887	6/2	47,466	12,793	5/5

TOTALS.

Years.	(1) Total taken by Net and Line.			(2) Total taken by Trawl.			(3) ‖ Total quantity and value of all Fish landed.		
	Cwts.	£	Price per Cwt.	Cwts.	£	Price per Cwt.	Cwts.	£	Price per Cwt.
1897	4,408,327½	1,284,098	5/10	593,344¾	343,656	11/7	5,001,672¼	1,627,754	6/6
1898	5,774,331¼	1,426,633	4/11	783,436¾	453,233	11/7	6,657,768	1,879,866	5/8
1899	4,161,263	1,589,674	7/8	983,813	600,259	12/2	5,145,076	2,189,933	8/6
1900	4,292,183	1,622,567	7/7	1,077,082	703,427	13/1	5,369,265	2,325,994	8/8
1901	5,056,322	1,413,283	5/7	1,328,848	825,027	12/5	6,385,170	2,238,310	7/
1902	5,398,198	1,687,888	6/3	1,467,830	814,780	11/1	6,866,028	2,502,668	7/3
1903	4,952,438	1,571,355	6/4	1,566,370	829,932	10/7	6,518,808	2,401,287	7/5
1904	6,242,196	1,389,345	4/5	1,705,633	841,757	9/10	7,947,829	2,231,102	5/7
1905	6,110,879	1,701,031	5/7	1,745.431	948,117	10/10	7,856,310	2,649,148	6/9
1906	5,725,072	2,021,853	7/1	1,868,297	955,740	10/3	7,593,369	2,977,593	7/10

* Include sprats, sparlings, and mackerel, returns of which are immaterial.

† Include cod, ling, torsk, saithe, whitings, haddocks, and conger-eels.

‡ Include flounders, plaice, brill, halibut, lemon soles, and turbot. Skate, which scientifically are not classed amongst flat-fish, were also included up to and including 1905. As this fish is of much smaller value than the other fish included, the average price of flat-fish was thus considerably lowered, but in 1906 this disturbing factor has been removed by the inclusion of skate in another column

§ Comprise principally sillocks, lythe, and bream up to and including 1905. In 1906 skat e are included.

‖ Exclusive of shell-fish.

Note.—Round fish now (1904) comprise certain species of fish formerly included under "Unclassified Fish."

(d) SHELL-FISH.

Increase in Value on 1905.

Although the total value of shell-fish landed in Scotland in the year 1906 (£72,322) was about 2⅓ per cent. higher than in 1905, it still fell considerably below the average for the preceding ten years. The increase was referable to an improvement in the landings of oysters, mussels, and crabs, though this was to some extent counterbalanced by a falling-off in lobsters, clams, and unclassified shell-fish. Towards the total value of the catch, the East Coast contributed 34 per cent., the West Coast 53 per cent., and Orkney and Shetland 13 per cent., these proportions being identical with those of the preceding year.

Lobsters.

Slight Decrease in Catch and Value.

From the point of view of value, lobsters are the most important contributors to the returns of shell-fish. In 1906 the total number landed was 7316 hundreds, valued at £35,957, there being a slight decrease, both in quantity and value, as compared with 1905. The whole decrease was referable to East Coast districts (chiefly Wick, where the meteorological conditions were unfavourable). Orkney and Shetland and the West Coast showed slightly improved returns.

Crabs.

Increase in Catch and Value.

The crabs are caught principally on the East Coast, and in 1906 this section accounted for over 91 per cent. of the total quantity (20,916 hundreds) and nearly 95 per cent. of the total value (£13,182), while West Coast districts contributed the bulk of the remainder. Leith, Eyemouth, Wick, Montrose, and Stonehaven were the principal contributors to the catch, and these districts accounted also for practically the whole of the increase in value, which amounted to 13 per cent. on the preceding year's figures.

Oysters.

Considerable Increase in Catch and Value.

Nearly 96 per cent. of the total landings (3897 hundreds) and over 95 per cent. of the total value (£1568) were taken from the Loch Ryan beds in Ballantrae district, the small residue being obtained mainly in Inveraray district (Loch Tarbert beds). The returns exhibit an increase as compared with those for 1905 of 1717 hundreds and £703, wholly referable to the Loch Ryan beds, where dredging was more assiduously carried on than in the preceding year.

Mussels.

Considerable Increase in Catch and Value.

The landings of mussels in 1906 amounted to 128,486 cwts., valued at £7222, as compared with 102,927 cwts. and £6065 in 1905. The great bulk of the increases thus indicated was referable to the Clyde mussel beds, and was due partly to the greater demand generally for mussel bait and partly to the operations of a large number of working men who took to line fishing while they were idle on account of the boilermakers' strike on the Clyde.

Clams.

Decrease in Catch and Value.

Practically the whole of the clams landed in Scotland are obtained from the Firth of Forth beds. In 1906 the total quantity landed was 7391 cwts., valued at £1083, as compared with 7848 cwts. and £1129 in the preceding year.

Unclassified Shell-fish.

Decrease in Catch and Value.

Unclassified shell-fish consist chiefly of periwinkles and cockles. The total quantity landed in 1906 was 45,594 cwts., valued at £13,310, as compared with 53,220 cwts. and £14,611 in 1905. Almost the whole of the decline in quantity and value was referable to the West Coast. The great bulk of the falling-off occurred in Barra and Loch Carron and Skye districts, though the Clyde districts were also in some degree responsible. In Barra district the quantity of cockles gathered was little more than one-third of that obtained in 1905, a result ascribed by the officer to over-fishing in the latter-mentioned year; while in Loch Carron district the decline was due to less attention than usual being paid to whelk-gathering.

The following Table shows the quantity and value of the different kinds of shell-fish landed in Scotland since 1897 inclusive:—

Statement of Catch and Value for 10 Years.

Year.	Oysters.			Mussels.			Clams.		
	100's.	Value £	Price per 100.	Cwts.	Value £	Price per Cwt.	Cwts.	Value £	Price per Cwt.
1897	4,016	1,614	8/	280,976	14,362	1/	19,258	2,408	2/6
1898	4,060	1,588	7/9	191,738	10,319	1/1	14,013	1,595	2/3
1899	4,701	1,884	8/	169,679	8,858	1/1	12,125	1,485	2/5
1900	7,964	3,188	8/	143,422	7,617	1/1	6,372	861	2/8
1901	6,234	2,447	7/10	102,541	5,976	1/2	6,587	802	2/5
1902	2,909	1,251	8/7	95,663	5,445	1/2	4,320	586	2/9
1903	2,116	894	8/5	102,958	6,207	1/2	4,606	637	2/9
1904	2,501	937	7/6	92,142	6,046	1/4	6,993	944	2/8
1905	2,180	865	7/11	102,927	6,065	1/2	7,848	1,129	2/10
1906	3,896	1,568	8/	128,486	7,222	1/2	7,391	1,083	2/11

Year.	Lobsters.			Crabs.			Unclassified Shell-fish.			Total Value.
	100's.	Value £	Price per 100.	100's.	Value £	Price per 100.	Cwts.	Value £	Price per Cwt.	£
1897	7,292	32,426	88/11	34,944	18,395	10/7	56,057	13,198	4/8	82,403
1898	6,664	29,920	89/10	36,466	17,982	9/10	57,985	15,726	5/5	77,130
1899	7,280	34,150	93/10	31,125	18,761	12/1	55,822	15,413	5/6	80,551
1900	6,804	32,044	94/2	31,280	17,789	11/4	56,728	14,407	5/1	75,906
1901	7,900	36,643	92/9	31,525	18,698	11/10	57,478	16,523	5/9	81,089
1902	7,864	37,114	94/5	30,763	18,520	12/-	55,469	15,035	5/5	77,951
1903	7,055	34,567	98/-	25,657	16,314	12/9	55,443	14,979	5/5	73,598
1904	7,964	38,323	96/3	23,993	14,540	12/1	57,031	16,010	5/7	76,800
1905	7,603	36,317	95/6	19,903	11,675	11/9	53,220	14,611	5/6	70,662
1906	7,316	35,957	98/4	20,916	13,182	12/7	45,594	13,310	5/10	72,322

HERRINGS LANDED BY SCOTTISH FISHERMEN AT ENGLISH AND IRISH PORTS.

Increasing popularity of English Fishing.

The popularity of the principal English herring fishing as a source of additional revenue to Scottish fishermen continues steadily to increase, and, in view of the boom in the construction of steam drifters in Scotland, it is not improbable that this popularity will be enhanced in future years. The Irish herring fishings are not so popular with Scottish crews, but they, too, for some years have attracted an increasing number, though in 1906 the record figures of 1905 were not attained.

A table showing the results of the English and Irish fishings, in so far as they affected Scottish fishermen, for the last ten years appears in the general statement at the beginning of the Board's Report, while the following return gives detailed particulars for the year under review.

RETURN showing the Number of Scottish Boats employed in the Herring Fishing on the Coasts of England and Ireland, as well as the Estimated Quantity and Value of the Herrings caught by them, during the Year 1906.

Statement of Results for 1906.

Scottish Districts to which Boats belong.	Particulars of Fishing on Coasts of England.			Particulars of Fishing on Coasts of Ireland.			Total Cwts.	Total Value.
	Boats.	Cwts.	Value.	Boats.	Cwts.	Value.		
			£			£		£
Eyemouth -	94	70,777	26,010	26	9,758	3,485	80,535	29,495
Leith - -	54	51,430	18,900	27	6,048	2,160	57,478	21,060
Anstruther -	176	158,830	48,340	4	1,400	720	160,230	49,060
Montrose -	76	46,435	13,690	–	–	–	46,435	13,690
Stonehaven -	11	4,224	1,690	–	–	–	4,224	1,690
Aberdeen -	33	65,629	26,724	–	–	–	65,629	26,724
Peterhead -	97	140,550	59,848	7	1,617	920	142,167	60,768
Fraserburgh -	106	55,906	23,033	109	9,705	9,137	65,611	32,170
Banff - -	109	97,714	37,643	45	8,428	7,118	106,142	44,761
Buckie - -	326	308,112	136,450	40	10,360	7,400	318,472	143,850
Findhorn -	142	133,210	52,110	28	2,880	1,658	136,090	53,768
Cromarty -	14	9,989	4,550	7	1,610	1,420	11,599	5,970
Helmsdale -	13	18,483	7,912	2	616	516	19,099	8,428
Wick - -	32	44,429	18,406	1	192	220	44,621	18,626
Stornoway -	9	4,518	1,800	–	–	–	4,518	1,800
Campbeltown	–	–	–	11	945	802	945	802
Totals - -	1,292	1,210,236	477,106	307	53,559	35,556	1,263,795	512,662

English Fishing.

With regard to the English fishing it may be pointed out that the number of Scottish boats engaged (1292) not only exceeded the number for the preceding year by 85 but was the highest on record. A promising beginning was made with the fishing, but, unfortunately, stormy weather supervened in the latter half of November, with the result that the catch fell short of the landings in the preceding year by over 329,000 cwts., while the gross earnings showed a deficiency of over £8000. Prices ruled exceptionally high, however, so that the loss to fishermen, financially, was not so great relatively to the decline in the catch, and the total sum realised was second only to the record return in 1905. The average earnings per crew were £369, as compared with £402 in 1905, £251 in 1904, and £353 in 1902—the most successful year prior to 1905.

Comparison of Results for Different Districts.

As in previous years, Buckie district was represented by the greatest number of crews with over one-quarter of the total number, followed by Anstruther with between one-seventh and one-eight, Fraserburgh and Banff with about one-twelfth, and Eyemouth and Peterhead with about one-fourteenth. The remaining East Coast districts were represented by from 11 to 76 boats, but the only representative of the West Coast was Stornoway district with nine boats. From an examination of the Table it appears that the crews hailing from Aberdeen, Peterhead, Helmsdale, and Wick were the most successful, their earnings averaging £809, £617, £608, and £575 respectively. In explanation of these figures, however, as compared with the average earnings, it must be kept in view that nearly two-thirds of the boats from these districts were steam drifters, which earned much larger sums than the sailing boats. As illustrative of the difference in the earnings (a difference due to the rapidity with which steam drifters can get to and from the fishing grounds, to their ability to work in weather when sailing boats are unable to do so, &c.), it may be stated that out of the total fleet of 1292 boats engaged, 257 were steam drifters, whose average earnings were £942, while the average earnings of the remaining 1035 sailing boats were only £227. Details of the operations of the various steam drifters engaged at the English fishing will be found in Table III. embodied in the article on "Means of Capture" (page xxii), to which reference should be made.

Irish Fishing—Improved Results.

The total number of Scottish crews engaged at the Irish fishing was 307, and their total catch was 53,559 cwts., valued at £35,556. The average catch per boat was thus 174 cwts. and the average earnings £116, as compared with 136 crans and £70 in 1905. The boats from Eyemouth, Leith, and Anstruther districts fished mainly in the south of Ireland, while the boats from other districts operated chiefly on the north coast, and it will be noted from an inspection of the Table that the former received very much smaller prices than the latter. As in preceding years, Fraserburgh sent the greatest number of boats to the fishing (about 36 per cent. of the total), while it was followed by Banff, Buckie, Findhorn, Leith, and Eyemouth with, collectively, over 82 per cent. of the remainder of the fleet. The Helmsdale crews were, on the whole, most successful with average earnings of £258, followed by the Wick crew with £220, and the Cromarty crews with £203, while the Findhorn crews with average earnings of only £59 were the least successful.

FISHERIES OF THE PORT OF ABERDEEN.

In view of the fact that the returns for each district are now given in a much more detailed form than in preceding years, it is considered that the special article on the Aberdeen district fisheries need not be repeated every year and that it will be sufficient if it is published every five years.

FISH IMPORTED.

Considerable Increase in 1906.

From a return kindly furnished by H.M. Customs it appears that in 1906 the total quantity of fresh fish imported into Scotland (exclusive of shell-fish) was 121,866 cwts., valued at £34,551, as compared with 48,613 cwts. and £13,885 in the preceding year. Between one-seventieth and one-eightieth of the imports of fresh fish consisted of herrings (Norwegian), while the great bulk of the remainder consisted of fish landed from Icelandic and other distant fishing grounds by foreign trawlers.

The imports of shell-fish were valued at £1076, of which about one-sixth consisted of oysters for use as food, and the remainder chiefly of Dutch mussels landed at Leith for purposes of bait.

FISH USED FRESH.

Total Fish Used Fresh.

During the year under review 2,091,168 cwts. of fish (exclusive of shell-fish) were sold for use in a fresh state or consumed fresh in the localities where landed, an excess of 260,086 cwts., or 14 per cent. on the return for 1905. This quantity represents 28 per cent. of the quantity landed, compared with 23 per cent. in the preceding year, and an average of 31 per cent. in 1900-4.

Proportion of Fish Landed.

Aggregate Value.

The value of the fish placed on the fresh markets was assessed at £1,031,597, or £153,387 (equal to 17 per cent.) over the assessment for 1905. This amount is equivalent to 35 per cent. of the value of the fish landed, contrasted with 33 per cent. in the preceding year, and an average of 41 per cent. in the years 1900-4.

Average Price per cwt.

The assessed value equals 9s. 10d. per cwt., or 3d. per cwt. more than in 1905, and 4d. per cwt. in excess of the average price for the preceding five years.

Contributions to Fresh Fish Supplies.

Contributions to Supplies—Coasts and Districts—Quantity.

Of the total quantity of fish placed on the fresh markets, the East Coast furnished 79 per cent., Orkney and Shetland 2 per cent., and the West Coast 19 per cent.; while the more notable of the district contributions were made, in the order given, by Aberdeen, Leith, Anstruther, Montrose, and Stornoway.

Value.

The aggregate value of the fresh fish supplies was contributed by the three geographical divisions in the respective proportions of 85, 1, and 14; while the larger individual contributions were made by the same districts and in the same order as in the case of the supplies, excepting that Montrose occupied the third place and Anstruther the fourth.

Species of Fish—Quantity.

29 per cent. of the supplies consisted of haddocks, 26 per cent. of herrings, 16 per cent. of cod and codlings, 5 per cent. of skates and rays, 4 per cent. of whitings, and a similar percentage of ling.

Value.

In the assessment of value similar positions were taken by the first three enumerated species of fish, haddocks contributing 27 per cent., herrings 18 per cent., and cod and codlings 15 per cent., but the remaining species were displaced by plaice, halibut, and lemon soles, which furnished 8, 6, and 6 per cent. respectively.

Comparison with Returns for 1905.

Comparison with 1905—Coasts and Districts.

Compared with the figures for the preceding year, the returns for the East Coast show increases of 15 per cent. in the quantity, and 18 per cent. in the value, of fish placed on the fresh markets; those of the West Coast 13 and 16 per cent. respectively; and the Orkney and Shetland returns respective decreases of 11 and 6 per cent.

Species of Fish.

Extending the comparison to the various species of fish, by far the largest contribution to the increase in quantity is made by haddocks, while the next more important contributions are credited, in the order given, to cod and codlings, ling, mackerel, saithe, and whitings. The increase in value is accounted for, in the following order, mainly by haddocks, herrings, cod and codlings, lemon soles, and halibut.

Haddocks.

Haddocks—Comparison with previous years.

The supplies of fresh haddocks were greatly in excess of those of recent years, the returns showing increases of 53 per cent. on the figures for 1905, and 66 per cent. on the average of the preceding five years.

The excess over the returns for 1905 is referable almost entirely to the East Coast, the West Coast showing only a trifling increase, and Orkney and Shetland exhibiting—relatively to the amount of the supplies drawn from the two bracketed northern districts—a considerable shortcoming.

In view of the extent to which they contribute towards the Scottish supplies of fresh haddocks, it is not surprising that by far the larger proportion of the East Coast excess should be accounted for (in the order given) by the districts of Aberdeen, Leith, and Montrose, which, it may be stated, exhibit respective increases on the previous year's figures of 98, 57, and 40 per cent. At the same time, several districts show advances which, although relatively small, are, in proportion to the quantities of fresh haddocks provided by those districts, of considerable extent. These embrace Findhorn and Anstruther, whose advances represent 74 and 55 per cent. respectively, and Cromarty, Helmsdale, and Wick, whose supplies show respective excesses of 18, 15, and 20 per cent.

Price per cwt.

While the aggregate value of the supplies returned is 30 per cent. greater than the previous year's figure, it is equivalent to a mean price of only 9s. per cwt., compared with 10s. 7d. in 1905, and an average of 10s. 10d. in 1900-4.

Herrings.

Herrings—Comparison with previous years.

Although over one-half of a million cwts. of herrings was placed on the fresh markets during the year, the actual quantity shows only a fractional percentage of increase on the return for 1905—a contrast to the increase in value, which reaches as much as 29 per cent.

Price per cwt.

The value returned yields a mean price of 6s. 8d. per cwt., compared with 5s. 2d. per cwt. in 1905, and an average of 6s. 2d. in the years 1900-4.

The supplies provided by the West Coast exceeded those of the preceding year by 18 per cent. On the other hand, the returns for the East Coast show a contraction to the extent of 9 per cent.

The districts more closely identified with the West Coast increase embrace, in the order of their importance, Rothesay, Ballantrae, and Greenock; while on the East Coast there are also excesses in the case of Peterhead, of greater amount, and in that of Findhorn, Stonehaven, and Buckie, of less amount.

Among a number of district shortcomings involving the three geographical divisions, the more notable are accounted for, in the order given, by Campbeltown, Stornoway, and the three most southern districts on the eastern seaboard.

FISH CURED.

I.—Herrings.

Demand Increasing.

The progress of the curing industry is dependent in large measure on the result of the different herring fisheries prosecuted round the Scottish coast, as its success is usually in proportion to the quantity of herrings landed. The demand for cured herrings is greatly on the increase, particularly in Russia and Germany, and, in lesser degree, in America. While the returns for 1906 fall short of the record figures of 1905, they compare favourably with those recorded in average seasons. (App. D, No. I.)

Total Herrings Cured.

The total quantity of herrings cured was a little short of two million barrels, the exact figures being 1,997,862 barrels, as compared with 2,111,601 barrels in 1905. The falling-off was due entirely to a decline in the catch of over one hundred thousand crans, and is more than accounted for by a decrease of 323,982 barrels in the Shetland returns.

East Coast Returns.

The East Coast returns, on the other hand, show an increase of 243,167 barrels, and it has regained the pride of place which it had resigned in 1905 in favour of Shetland.

Shetland Returns.

Although the set-back in Shetland is a rather serious one, still there is no cause for despondency regarding the future, as the check in the progress of herring-curing there is probably only temporary. A somewhat similar check took place in 1902, but the improvement in the succeeding years till last year was unbroken and phenomenal, as will be seen from the following figures:—

	Barrels.		Barrels.
1896 - -	149,355	1902 - -	486,745
1897 - -	177,018	1903 - -	489,654
1898 - -	266,791	1904 - -	814,839
1899 - -	354,545	1905 - -	1,024,044
1900 - -	416,789	1906 - -	700,062
1901 - -	636,729		

Prices for Fresh Herrings.

The demand for cured herrings was exceedingly keen, and the prices paid by the curers for the fresh fish were consequently above the average, the fishermen reaping a most lucrative harvest, and the shore workers generally sharing in their prosperity.

Quality.

The summer fishing in Shetland and on the East Coast commenced earlier than usual, and as there was a keen demand on the Continent, fishermen and curers were tempted to take full advantage of the early beginning to catch and cure as large a quantity as possible. These early herrings were not, however, of such good quality as those which are usually taken later in the season and did not, therefore, prove quite so suitable for curing, and being taken so early in the season were not eligible for the Board's Crown Brand.

Cured on Shore and at Sea.

The quantity of herrings cured on shore in curing-yards was 1,991,010 barrels, or 39,246 less than in 1905, while that cured on board of curing-vessels at sea was only 6852 barrels, or 74,493 less than in the preceding year, the number of such vessels engaged having dropped from 41 to 23.

Details.

The most marked increases are shown in the cases of Eyemouth (70,150 barrels), Peterhead (56,000), Aberdeen (53,600), and Fraserburgh (46,900) on the East Coast, and Barra (34,000) on the West Coast, while the principal decreases are found in the case of Wick (10,800 barrels) on the East Coast, 323,982 barrels in the case of Shetland, and 47,600 and 12,500 in the returns of Loch Broom and Stornoway, respectively, on the West Coast.

Of the herrings cured on shore, 1,789,438 barrels were gutted and pickled, 16,188 barrels pickled ungutted, the equivalent of 144,675 barrels kippered and packed in boxes, the contents of 29,493 barrels put up in tins, and 11,216 barrels cured as bloaters or "reds."

East Coast districts accounted for 939,302 barrels of the total cured gutted, Shetland and Orkney for 736,979, and the West Coast for 113,157.

Cured Ungutted.

Under herrings cured ungutted a substantial increase is shown over the figures for 1905, the return being more than three times greater than that for that year—Shetland and Stornoway districts showing large increases.

Kippering.

The kippering industry was not quite so successful as in 1905, a decrease of 5702 barrels being shown. Wick, Shetland, Stornoway, and Greenock districts contributed practically the whole of the decrease.

Bloaters.

A decline (of 3442 barrels) is also shown in the quantity of herrings treated as bloaters or "reds," a process which is now almost exclusively confined to East Coast districts.

Tinned.

The tinning industry continues to make progress, particularly at Aberdeen—its headquarters, that port and Fraserburgh contributing almost the whole of the returns. The returns of 1906 show an improvement over those of 1905 of nearly 2000 barrels.

Earnings of Shore Workers.

The gutters, packers, and other workers on shore experienced a most lucrative season, and it is estimated that the wages and "arles" paid to gutters and packers alone would amount to £100,000. A large number of the women employed hail from the Western Isles, and their earnings materially contribute to the well-being of the natives of those islands. The coopers, carters, and labourers employed also shared in the general prosperity, and earned very good wages during the season.

Persons Employed.

The number of persons engaged in these subsidiary branches of the industry was 42,422, an increase over the preceding year of 924. These were composed of 668 curers, 17,157 gutters and packers, 2556 coopers, 3994 carters and labourers, 718 clerks, 8867 British and 4562 foreign seamen employed in exporting, &c., cured fish, and 2314 British and 1586 foreign seamen engaged in importing material for making barrels and salt for curing. (Appendix F, pp. 190–191.)

Sailors Employed.

A very gratifying feature of the Appendix is the marked substitution of British for foreign sailors in the carrying trade connected with the curing industry, there being an increase of 1401 in the number of British seamen so employed over the return for 1905, and a net decrease of 745 in the number of foreign seamen.

Curing on Board Vessels.

A serious decline is shown in the number of vessels fitted out for curing herrings at sea as compared with the preceding year, the figures being 23 and 41 respectively. Shetland alone contributes 12 to the total decrease, and Loch Broom and Loch Carron districts each show a decline of five vessels. A proportionately large decrease is shown in the quantity of herrings cured in this manner as well as in the number of men employed, the decreases being 74,493 barrels and 214 men respectively.

The high prices prevailing at Lerwick had the effect of reducing the number of Norwegian vessels curing there, and also of curtailing the quantity cured by those which did arrive, fewer herrings being bought by them than usual, while they also left for home comparatively early in the season.

The complete failure of the loch fishings in the autumn and early winter is responsible for the great falling-off in the cases of Loch Broom and Loch Carron districts.

The rapid development of the industry generally is traced in Appendix D, No. II. (pp. 172–175), the quantity of herrings cured during the last 96 years being there shown.

Value of Cured Herrings.

Notwithstanding the decrease in the quantity of herrings cured last year, the estimated amount realised was nearly £316,000 greater than in the preceding year, which was a record year in this respect. The total reached £2,545,342, and this was made up of £493,622 for branded herrings (£14,517 more than in 1905) and £2,051,720 for unbranded herrings (£301,411 more than in 1905).

The East Coast was responsible for the whole of this improvement, Shetland and the West Coast districts both showing decreases. The keen demand on the Continent during the early part of the summer was accountable for this remarkable improvement in value, and while the curers shared in the improved conditions they did not in the end emerge from their transactions so favourably as the fishermen.

From the following Table it will be seen that the value of cured herrings since 1895, when returns relating to this aspect of the industry were first published, is subject to important fluctuations:—

Returns since 1895.

Year.	East Coast.	Orkney and Shetland.	West Coast.	Total.	Average Price per Barrel.
					s. d.
1895	£971,975	£239,518	£159,738	£1,371,231	18 0
1896	721,383	194,918	193,684	1,109,985	14 10½
1897	625,557	226,161	196,491	1,048,209	21 2
1898	905,447	236,043	240,656	1,382,146	15 4
1899	835,956	507,512	370,450	1,713,918	29 2
1900	823 106	542,099	299,469	1,664,674	26 7
1901	739,905	686,965	277,920	1,704,790	21 3
1902	1,235,617	577,531	300,886	2,114,034	23 5
1903	1,005,328	510,023	272,073	1,787,424	22 1
1904	891,841	689,439	234,819	1,816,099	17 7¼
1905	939,684	1,041,855	247,875	2,229,414	21 1½
1906	1,329,086	985,670	230,586	2,545,342	25 5¾

II.—Cod, Ling, Haddocks, &c.

General Results.

Although the cod-smoking industry suffered a slight relapse last year, the quantity cured dried shows a decided improvement over the returns of the preceding year, as did also, in a lesser degree, the pickling branch of the industry. The total returns were 124,522 cwts. smoked (decrease 29,821 cwts.), 81,967 cwts. dried (increase 16,258 cwts.), and 1741 barrels pickled (increase 541 barrels). (Appendix D, No. I.) The quantity of fresh fish which yielded this result was 384,742 cwts., or 53 per cent. of the total catch. The principal centres of the drying industry were Aberdeen (40,724 cwts.), Orkney (26,920 cwts.), and Shetland (8300 cwts.). The latter was at one time the principal centre, but with the decline of the famous Faroe and Iceland cod fishery, which was engaged in by local curing smacks, that district has lost its position. Last year only three local smacks were fitted out for that fishing, and two of these were manned by Faroese crews, but a number of Faroese vessels landed their catches in Shetland and contributed materially to the increase in the returns of dried cod.

Principal Centres for Drying Cod.

Pickled Cod.

The returns of pickled cod show a slight improvement, but that branch of the industry is now of little importance.

Cod "Smoking" Industry.

The most important branch is that of cod-smoking or "filleting," over 124,500 cwts. being preserved in this way last year. This is a falling-off of 29,821 cwts. as compared with the returns for 1905. Smoking is perhaps scarcely a correct description of the process of preserving employed, as the fish are first filleted and then subjected to a treatment which gives them the appearance of having been smoked, and the result is so attractive to the eye as well as to the palate that the demand for "smoked" cod in the large towns is greatly on the increase. The bulk of the "filleted" fish consists of trawled fish, and emanates from Aberdeen.

Ling-curing.

Aberdeen is also the headquarters of the ling-curing industry. The total quantity cured was 26,822 cwts., made up of 14,322 cwts. dried, 12,500 cwts. smoked or filleted—both declines from 1905.

Tusk and Saithe.

A decrease is also exhibited in the return of tusk cured, the total being 2518 cwts., a falling-off from the 1905 returns of 2255 cwts. Saithe cured also show a decline in the quantity dried, but an improvement in that smoked or filleted.

Haddocks.

Haddock-curing is now an important industry, particularly at Aberdeen, the total quantity smoked last year being 292,582 cwts., which is a falling-off from the preceding year's return of 47,851 cwts. Slight increases are shown in the quantities dried and pickled.

Mackerel.

The curing of mackerel is practically confined to the district of Barra, 1304 out of 1389 barrels cured in pickle being accounted for there, and the remainder by Loch Carron district. One-half of the quantity cured was disposed of for local consumption, and the remainder was exported to the United States, where it realised an average price of ten dollars per barrel.

The following Table shows the quantity of fish, other than herrings, cured annually since 1898, viz.:—

Year.	Cod.			Ling.		Tusk.		Saithe.		Haddocks.			Mackerel.
	Cwts. Dried.	Cwts. Smoked	Barrels Pickled.	Cwts. Dried.	Cwts. Smoked	Cwts. Dried.	Cwts. Smoked	Cwts. Dried.	Cwts. Smoked	Cwts Smoked.	Cwts. Dried.	Cwts. Pickled.	Barrels Pickled
1898	44,864	1,724	7,350	22,157	—	2,399	—	20,725	—	264,606	—	—	—
1899	40,517	1,634	7,865	29,149	—	2,425	—	23,747	—	283,883	—	—	—
1900	40,813	2,882	4,744	28,130	—	1,570	—	15,492	—	282,161	—	—	—
1901	36,393	14,995	4,875	23,191	4,127	2,676	—	14,472	—	322,596	—	—	—
1902	42,046	23,001	2,821	13,363	9,350	1,991	—	17,283	—	337,677	—	—	—
1903	48,626	23,396	1,290	10,137	5,000	1,601	—	15,272	—	381,156	—	—	—
1904	60,693	110,737	2,147	15,714	2,000	2,019	—	18,831	—	386,604	6,809	6,549	830
1905	65,709	154,353	1,200	21,102	15,290	3.395	1,378	19,406	15,960	340,433	11,709	—	1,473
1906	81,967	124,522	1,741	14,322	12,500	1,993	525	13,983	18,000	292,582	13,512	626	1,389

Value of Cod Ling, Haddock, &c. Cured.

The value of the fish (other than herrings) which was cured is estimated at £787,442, an increase of nearly £4000 over the return for 1905. The total was made up of £642,005 for smoked fish, £140,025 for dried, and £5412 for pickled fish.

The prices for dried cod and ling varied from £22 to £26 a ton.

Total Value of all Cured Fish.

The grand total value of all fish cured reached the record figure of £3,332,784, or £319,840 more than the previous record, which was reached in 1905. The districts contributing most largely to the aggregate were Aberdeen (£938,068), Peterhead (£339,189), Fraserburgh (£334,722), Eyemouth (£166,701), and Wick (£157,747) on the East Coast; and Shetland (£909,483) and Orkney (£121,805); and the districts of Barra (£110,834), Stornoway (£88,255), and Greenock (£31,431) on the West Coast. (Appendix E, No. IV.)

HERRING BRANDING.

(1) Barrels of Herrings (*a*) Presented for, and (*b*) Refused Brand.

During 1906, 318,192 barrels of cured herrings—or 92,277½ less than in the preceding year—were presented to Fishery Officers for examination with the view of being branded if found to be in accordance with the Board's requirements, while 12,152½, or 3·82 per cent. of the number submitted, were adjudged to be below the standard of the brand, compared with 15,519½, or 3·78 per cent., in 1905.

Looked at from the standpoint of the different brands, the Mattie is debited with the highest proportion of barrels—amounting to 5·79 per cent.—submitted for examination which were not conform to the regulations, while, from the point of view of the fishery districts, the percentage of rejections was highest in the case of Findhorn, against which there is recorded 27·08 per cent., the second place being taken by Buckie, with 18·39 per cent., and the third by Montrose, with 16·66 per cent.

(2) Barrels Branded.

Barrels Branded.

During the year the Crown brand was applied to 306,033½ barrels of cured herrings, a less number than was branded in 1905 by 23 per cent. This decrease is attributable to a variety of circumstances, among which may be mentioned the large shortages in the quantities of herrings landed in the districts of Shetland and Wick during August, the month in which the fish caught are most suitable for the brand, and the increasing annual proportion of the season's catch which is taken during June and the earlier portion of July, when the produce of the fishing is not capable of being kept in good condition for a length of time sufficient to meet the requirements of the Continental markets, and which is, accordingly, not eligible for the brand.

Decrease from 1905: Cause.

Allocation.

Of the total number of barrels which received the Board's imprimatur, the unusually large proportion of 28 per cent. was of such superior quality as to merit the premier brand, the Full brand was granted to 24 per cent., 14 per cent. was accorded the Mat. Full brand, the Spent brand was impressed on 16 per cent., and 18 per cent. was branded Mattie.

La. Full Brand.

The number of barrels which attained the standard of the La. Full brand exceeded the return for 1905 by only 2 per cent. As usual, by far the largest proportion—amounting in this instance to 84 per cent.—was branded in Shetland, while, in the order given, Peterhead, Fraserburgh, Orkney, and Wick were the only other districts in which the brand was applied to any appreciable extent.

Full Brand.

Of the number of barrels accorded the Full brand—which was fewer by 21 per cent. than the number returned for 1905—the larger proportions were branded, in the order specified, in the districts of Peterhead, Fraserburgh, and Shetland, while, in a similar order, the districts of Eyemouth, Aberdeen, Wick, and Orkney accounted for the more notable of the smaller proportions.

Mat. Full Brand.

Eyemouth was much more closely associated with the application of the Mat. Full brand than any other district, the actual number of barrels branded within its limits representing 33 per cent. of the total brandings, which, it may be stated, exceeded those of 1905 by 6 per cent. The other districts in which this brand was applied to a considerable extent included, in the order of their importance, the districts of Fraserburgh, Peterhead, Aberdeen, and Wick.

Spent Brand.

Of the shortcomings brought out on a comparison with the figures for the preceding year, the largest—amounting to 47 per cent.—occurs in the case of the Spent brand, a fact which affords some indication of the quality of the herrings presented for Government inspection during the year. The districts in which the larger proportions of barrels of Spent herrings were branded were, in the order given, Shetland, Fraserburgh, and Peterhead, while Orkney and Wick accounted for the more important of the smaller proportions.

Mattie Brand.

The number of barrels stamped with the Mattie brand in Fraserburgh and Peterhead districts combined represented 51 per cent. of the aggregate Mattie brandings, which, in turn, show a decrease of 36 per cent. from the returns of 1905. The more important of the lesser contributions to the brandings were made, in the order given, by the districts of Eyemouth, Wick, Aberdeen, and Shetland.

CURED FISH EXPORTED.

I.—Herrings.

Total of Herrings Cured and Exported.

The total quantity of cured herrings exported from Scotland last year was 1,542,688 barrels, or a decrease of 101,438¼ barrels from the preceding year's figures. Of these, 245,322½ barrels received the Board's official brand, the remainder being unbranded. The proportion exported to European ports was 1,461,856 barrels, to places out of Europe—chiefly America—69,326 barrels, and to Ireland 11,505½ barrels. (Appendix E, No. II., pp. 180–1.)

Prolonged Visit of Assistant Inspector of Fisheries to Continental Markets, and Report thereon.

In connection with the export trade an interesting innovation was initiated by the Board last year, Mr. Skinner, their Assistant Inspector of Sea Fisheries, being despatched to the Continent during the currency of the great summer herring fishery to watch the arrivals of cured herrings and to inquire into complaints as to their condition. An interesting report prepared by him on his return was circulated among those interested, and a copy is inserted among the Appendices to this Report (pp. 288). During his stay on the Continent he visited Hamburg, Stettin, Danzig, Königsberg, and Libau, and a number of smaller towns, and was received with great courtesy by the members of the British Consular Service at these ports. His stay extended over the months of August, September, and October, and during that time he examined a considerable number of barrels of branded and unbranded herrings.

He found that a large proportion of the exports from here are sold *ex* ship and carried into the interior by barges, with a carrying capacity varying from 1000 to 2000 barrels, through the numerous canals and waterways by which North Germany is intersected. In many instances the barrels are transferred direct to the barges, and no care is taken to ensure that they contain the requisite amount of pickle, the result being that many herrings must reach their destination in a poor condition.

Demand keen.

The demand for Scottish-cured herrings was found to be very keen, and prices rose correspondingly, crown-branded herrings realising from 5 to 10 marks per barrel more than at the corresponding period in 1905, while unbranded herrings of average cure sold at from 3 to 5 marks per barrel less than those branded.

Hot weather damaged Herrings.

The hot weather which prevailed had a very damaging effect on the deck cargoes of early caught herrings, damages having to be paid in one instance by the carriers to the consignees. On one occasion (at Stettin) there were about 7000 barrels exposed on the piers to a broiling sun. In many cases they were protected by matting and watered, and as opportunity offered they were removed to the stores, the accommodation in which was excellent.

Causes for keener demand.

The high price of meat in Germany owing to the operation of the tariff, and the scarcity of foodstuffs in Russia naturally contributed to the increased demand and the higher prices obtaining.

Advice to Curers.

The report concludes with some words of excellent practical advice to curers and exporters of Scottish herrings, and in view of the increasing competition which has to be contended with from Norway, Germany, and Holland, it is to be hoped that the advice will be taken seriously to heart.

Exports to German Ports.

Germany again imported by far the largest quantity of Scottish-cured herrings, but a considerable portion of these pass on to Russia and Austria for consumption there. The export to German ports amounted to 1,025,886 barrels, or 31,429 barrels less than in 1905. The chief ports to which shipments were made were Stettin (316,676 barrels), Königsberg (305,634), Hamburg (207,687) and Dantzig (194,334), considerable decreases being shown from the figures for 1905 in the cases of Stettin and Hamburg, and large increases in the cases of Königsberg and Dantzig. From the fact that these latter ports are the main channels for the trade with Russia, it can be reasonably inferred that the increased demand last year was really due to improved trade with that country in cured herrings, and this notwithstanding the high tariff of 13s. a barrel imposed.

Fully two-thirds of the herrings stored at Königsberg and Dantzig in the extensive and excellent storage accommodation provided were intended for Russian markets, other countries reached being Galicia, Poland, Eastern Pomerania, Silesia, and Roumania.

Fresh Herrings Exported to Hamburg.

It is interesting to note here that a large quantity of fresh herrings is now exported to Hamburg for the smoking and preserving establishments in the neighbourhood of Hamburg, Altona, and Schluput. The number of such factories within a radius of 30 miles from Hamburg is 56, and up to 12th September last 67,821 half-cran packages of fresh herrings were imported from Scotland alone.

Export to Russia.

The export to Russian ports reached 424,200½ barrels, as compared with 430,554¼ barrels in 1905, the import being divided between Libau (183,444½ barrels), St. Petersburg (157,872), Riga (36,159), and Wyborg (25,755½), Smaller quantities were consigned to Port Baltic, Revel, Odessa, and Helsingfors. All the ports except Revel show increases in the shipments, the greatest improvement being observable in the case of St. Petersburg (51,656) and Libau (29,587 barrels). This improvement was due almost entirely to the diversion of the imports formerly credited to Archangel to the Baltic ports. In 1904 and 1905 large consignments of Scottish-cured herrings were sent to Archangel because they were admitted free of duty (13s. a barrel) if carried in Russian ships. An extensive trade at once sprang up with places hitherto supplied through Baltic ports, but the dealers from the latter made representations to the Russian Government on the subject, and the concession was withdrawn last year, with the result that not a single barrel was shipped to Archangel. Another interesting feature of the returns is the appearance of Odessa among the receiving ports for the first time for many years. The Russian herring trade is exploited principally by Jewish firms, and their enterprise and perseverance account largely for the opening up of new markets in the interior for Scottish-cured herrings.

At Königsberg there there are from 25 to 30 herring agents (apart from seven herring importers), and nearly all of these are Russian Jews.

Although the port of Libau supplies many of the Courland districts, a large business is also done with Southern Russia. While visiting the herring stores there the Assistant Inspector met two buyers—one a woman from near Moscow who was desirous of buying 600 barrels, and the other a man from Rostow who required 65. The freight and duty alone to Moscow was 20s. a barrel, while that to Rostow was 24s.

District Returns.

The principal districts exporting to Europe were Shetland (472,954 barrels), Leith (323,412), Fraserburgh (185,136), and Peterhead (153,836). The exports from Leith and Glasgow consisted almost entirely of herrings cured in other districts.

Duty.

The duty on cured herrings sent to Germany is 3s. per barrel and to Russia 13s. per barrel, but the marked difference does not seem to retard the development of the trade with the latter country. The following Table gives the exports from Scotland to Germany and Russia since 1897, viz.:—

Export to Germany and Russia.

YEAR.	TO GERMANY.	TO RUSSIA.
1897 . . .	573,337	161,572
1898 . . .	1,077,296	303,088
1899 . . .	714,230	166,873
1900 . . .	769,126	172,462
1901 . . .	998,240	233,129
1902 . . .	1,049,502	292,987
1903 . . .	794,711	303,202
1904 . . .	1,095,683	384,443
1905 . . .	1,057,315	430,554
1906 . . .	1,025,886	424,200

Trade with Norway and Sweden, and with Holland.

The export to Norway and Sweden has declined considerably owing to the absence of a large number of the Norwegian fish-curing vessels from Shetland and Lochbroom during last year, the figures for 1906 and 1905 being 9283 and 74,720 barrels respectively.

The direct trade with Holland in cured herrings presents no feature of interest.

Export to America.

The export to America from Glasgow (Greenock district) exceeded that of the preceding year by 1631 barrels, the total reaching 69,396 barrels, of which 69,032 were sent chiefly to New York, Philadelphia, and Boston, 349 to Canada, and 15 to South America. A large quantity of preserved fish was also sent from Glasgow to America, over 43,000 cases, averaging one cwt. each, being exported.

Demand for Herrings in Liberia.

In his report on the trade of Liberia (West Africa) for 1906, H.M. Consul at Monrovia remarks that "herrings packed in cases is another article freely patronised by the natives. The principal article of diet of the Kru tribes consists of rice and fish, and they purchase locally large quantities of imported herrings and rice."

II.—COD, LING, &C.

Export of Cured Cod, &c.

The export of dried cod, ling, and hake shows a considerable improvement on the results for 1905, the figures for that year and 1906 being 52,824 and 71,268 cwts. respectively.

District Returns and Markets.

Glasgow, Leith, and Lerwick contributed the bulk of the returns, the Continental Roman Catholic countries taking 30,157 cwts., Ireland 29,974 cwts., and places out of Europe 11,137 cwts. The latter consisted of 760 cwts. sent to Buenos Ayres and 915 cwts. to the United States from Glasgow, while the export from Leith was sent to the Colonies by way of Glasgow and Liverpool. The fish are hard dried and put up in bales or boxes to hold a hundredweight, and the trade with places out of Europe is increasing annually. The figures for the last five years are as follow:—

1902,	2717 cwts.
1903,	3128 „
1904,	3475 „
1905,	4748 „
1906,	11,137 „

Markets for Pickled Cod and Mackerel.

The pickling of cod, on the other hand, is a decaying industry. Last year only 335 barrels of cod preserved in this way were exported, and these came from the districts of Aberdeen and Wick to Leith *en route* for Holland.

The export of cured mackerel is also slightly under the figures for 1905, the returns being 1394 and 1430 barrels respectively. Almost the whole of these came from Barra and were shipped from Glasgow for the United States, where they met with a ready sale.

PERSONS ENGAGED IN SCOTTISH SEA FISHERIES AND ALLIED INDUSTRIES.

Increased Returns.

During the year, 92,305 persons were employed in connection with the various branches of the Scottish sea fisheries, being 5 per cent. more than in 1905.

Analysis.

Of this number, 42 per cent. consisted of resident and non-resident fishermen and boys (of whom there were 2698 more than in the preceding year), 19 per cent. was composed of gutters and packers (whose number exceeded that of 1905 by 92), 10 per cent. was made up of persons of British nationality employed on board of vessels in curing, exporting, and carrying herrings and other fish (in the case of whom there was the largest increase—amounting to 1151—on the figures for 1905), persons of foreign nationality similarly employed (who were less numerous by 903 than in the preceding year) represented 5 per cent., and carters and labourers (of whom there were 104 more than in 1905) contributed 4 per cent. The remaining units, the mere enumeration of which will show the variety of the industries associated with that of sea fishing, embraced, in lesser proportions and in the order given, hawkers of herrings and other fish, boatbuilders, coopers, persons of British nationality employed on board of vessels in importing salt, stave wood, and hoops, fishmongers, makers and menders of nets, persons of foreign nationality employed similarly to those of British nationality, fish curers and dealers in fresh fish, clerks, box-makers, and persons employed in manufacturing barrel staves.

BOAT-BUILDING.

Total Output.

During the year there were launched from the boat and ship building yards of Scotland 307 fishing boats and vessels, of the aggregate value of £636,311, these figures showing excesses over the returns for the preceding year of 38 and 203 per cent. respectively.

Composition.

Of the gross output, 50 consisted of steam vessels, of the total value of £131,300, intended for employment in drift-net fishing for herrings or in long line fishing for white fish; 176 were sailing boats, of the aggregate value of £16,391, constructed for use in fishing for herrings with drift, seine, or trammel nets, or for white fish with small or hand lines, &c.; and 81 were steam vessels, of the total value of £488,620, intended for prosecuting white-fish fishing by means of otter trawl nets.

Steam Drifters and Liners.

The extent of the output of the first denomination of vessels—which exceeded that of 1905, both as regards number and aggregate value, in the ratio of seven to one—reflects the growing conviction of the community that steam-driven vessels possess distinct advantages over sailing boats in the prosecution of herring fishing by means of drift nets. Twenty-six of the vessels, of the average value of £2600, were launched from the building yards of Buckie district, and nine, of the mean value of £3000, from those of Aberdeen, while the remainder were built in the districts of Anstruther, Banff, Peterhead, and Findhorn, their average values ranging from £2,500 (the mean cost of the Banff and Peterhead vessels) to £2300 (that of the vessels constructed in Findhorn district).

Now that there are being built, more especially to the order of fishermen, so many steam vessels intended for employment in fishing for herrings by means of drift nets, the following description of one which was launched last February may not be uninteresting:—

Steel Steam Drifter: Description.

The vessel is 87 feet in length, 18 feet 6 inches in breadth, and 9 feet 10 inches in depth; and, when light, she draws 10 feet of water—compared with 8 feet 6 inches in the case of sailing boats, under similar conditions—but with a heavy catch of fish on board her draught is increased by 1 foot.

From the deck of the vessel rise two pole masts, from each of which a small sail can be stretched, and the foremast is fitted in such a way as to be capable of being lowered when the vessel is steaming against a head wind or when drift-net fishing is engaged in.

The cabin is provided with sleeping accommodation for nine men and other arrangements for the comfort of the crew which compare favourably with those obtaining on board sailing drifters of even the most modern type. The forecastle is fitted up with spare lockers, lamp-room, w.c., &c.

For the greater security of the crew, the vessel is divided into water-tight compartments.

The vessel is also provided with acetylene gas for lighting purposes.

The engine of the drifter is of the compound surface condensing marine type, with an 18-inch stroke, and two cylinders of 13 and 18 inches diameter respectively, developing 240 h.p. and giving a speed of 11 knots per hour. The marine boiler provided is of mild steel, and is 9 feet in length, with a mean diameter of 10 feet. It has a pressure of 120 lbs. per square inch.

The vessel cost £3300 and its fishing equipment £757, making together £4057, an increase of £2942 on the cost of a sailing drifter of modern type and fishing gear, which may be assessed at £1115.

Sailing Boats.

The year's output of sailing boats was short of the return for 1905 by 4 per cent., but there was an increase of 11 per cent. in value.

Twenty-eight of the boats constructed were first class, 36 second class, and 112 third class.

All the first class boats were built on the East Coast, and 15 of those consisted of craft of the larger type—measuring 45 feet keel and upwards, and costing on an average £733, and 13 of the smaller type—of 30 to 45 feet keel—of a mean value of £162.

Of the second class boats—measuring in length of keel from 18 to 30 feet—17 were constructed on the East Coast at a mean cost of £26; £15 represents the average value of three built in Orkney; and 16 were launched from the West Coast building yards at a mean cost of £100.

Forty-seven of the third class boats—which measure less than 18 feet keel—were constructed on the East Coast, 53 in Orkney and Shetland, and 12 on the West Coast, the average cost amounting to £14, £7, and £12 respectively.

Steam Trawlers.

Some idea may be formed of the vigorous condition of the trawling industry from the number and aggregate value of the steam trawlers built during the year, which show excesses over the returns for 1905 of 153 and 177 per cent. respectively, and over the averages for the previous decennial period of 98 and 142 per cent. Forty-seven of the vessels were constructed in the district of Aberdeen, at an average cost of £5919; £6131 represents the mean value of 30 launched on the Clyde; while four were built in Montrose district, at an average cost of £6625.

It is interesting to note that four of the trawl vessels constructed were intended for France, four were in execution of orders received from Germany, and one for Belgium.

BARREL-MAKING.

Year's Output.

During the year there were constructed in the cooperages and barrel factories of Scotland 2,094,014 barrels and 422,080 half-barrels for use in connection with the curing of white herrings, an output exceeding that of the preceding year by 14 and 1 per cent. respectively.

Composition.

As has obtained for some years, all the barrels and half-barrels were made of fir, except a very small percentage—amounting, in the case of 1906, to 3 and 2 per cent. respectively—which was constructed of ash, elm, birch, alder, larch, &c.

Allocation.

Except in the case of a trifling number, all the barrels and half-barrels were manufactured on the East Coast and in Orkney and Shetland; and by far the larger proportions of the output were contributed, in the order named, by the districts of Fraserburgh, Peterhead, Aberdeen, Wick, and Shetland.

Activity in Industry.

In 1906 there was considerable activity in the barrel-making industry, coopers having been kept fully employed at renumerative wages. In Wick and Buckie the requirements of the trade were beyond the capacity of the available coopers, whose work was accordingly supplemented by the introduction of machinery.

Hooping.

Without exception, all the barrels and half-barrels made were hooped partly with wooden and partly with iron hoops.

BASKET-BRANDING.

Baskets Branded.

In 1906 there were branded at the instance of fishery officers, as being in conformity with the relative regulations, 37,442 baskets intended for use in the purchase and sale of fresh herrings, this number exceeding the return for the preceding year by 5 per cent. Absorbing as it did nearly one-third of the trade of the year, Leith continues to be the principal centre for the manufacture of quarter-cran baskets, although Aberdeen and Wick occupy prominent positions in the industry.

CASUALTIES.

A return is given in Appendix F, No III., of the number of lives lost, and of the pecuniary loss sustained through boats and fishing gear being lost or damaged, in 1906.

The toll of lives taken by the sea in 1906 was, unhappily, much heavier than in the preceding year, the numbers being 69 and 46 respectively. Twenty-eight men went down with their boats, 20 fell overboard, eight were knocked overboard or killed by the sail, seven were washed overboard, three were lost in collisions, and the same number in taking harbours. It is a melancholy fact that, in spite of the increased provision on fishing vessels of life-saving appliances, such as life-belts and safety rails, in recent years, the annual roll of lives lost in the prosecution of the fishing industry shows no signs of diminution.

The number of boats which were totally wrecked was 48, of the total value of £19,667. These figures represent an increase of one in the number of wrecks, but a decrease of over £9,000 in value. The number of boats which sustained damage was 806, the loss involved being £22,108; and the loss sustained through loss of, or damage to, fishing material was £63,949, the total pecuniary loss thus amounting to £105,724, or £8750 less than in 1905. This loss was divided in about equal proportions between the trawling industry and the other branches of the fisheries.

MARINE SUPERINTENDENCE.

The superintendence of the sea fisheries round the coast of Scotland during the year 1906 was carried out by the "Minna," "Freya," "Brenda," and "Vigilant," the four cruisers belonging to the Board, H.M.S. "Ringdove," and her tender, H.M. cutter "Daisy." H.M.S. "Hussar" was also stationed at Shetland for a short period during the progress of the Great Summer Herring Fishing to maintain order among the great number of British and foreign fishermen and fishing craft concentrated in Baltasound. The superintendence by the Board's cruisers embraced the whole stretch of coast, not only of the Scottish mainland, but of the outlying groups of islands, including the Hebrides, Orkney, and Shetland—in all, a considerable area to patrol. Their principal duty was to endeavour to prevent illegal trawling and detect offenders; but they also had to enforce all the other Sea Fishery Acts and regulations and Board's bye-laws.

During the year the cruisers alone detected in all 33 vessels engaged in illegal trawling, and over 700 fishing craft were detained or cautioned for defective marking and lighting. In the prosecutions for illegal trawling a conviction was obtained against the offenders in every case, with the exception of two in which verdicts of "not proven" were given. Of these offending vessels eight were under the Norwegian flag and the remainder were British. A considerable amount of work was entailed in connection with the steps taken against foreign trawlers in the Moray Firth.

During the year the cruisers steamed 66,211 knots in their combined patrol duties, and 3100 tons of coal were consumed.

No accidents of any kind have to be reported, a fact which reflects credit on the commanders, officers, and engineers in the service, as risk of accident is necessarily incurred in handling the cruisers in close proximity to fishing vessels and navigating inshore in all sorts of weather.

PROSECUTIONS FOR ILLEGAL TRAWLING, &c.

Appendix L, No. II., contains particulars of the prosecutions of masters of trawling vessels for illegal fishing during 1906. There were 38 of such, being the same number as that for 1905, which year established a record. Since 1886, when prosecutions for illegal trawling were first undertaken, down to 31st December last, 439 prosecutions were instituted by the criminal authorities for this class of offence, the yearly average number for the same period being about 21.

The number of convictions obtained last year—35, or one more than that for 1905—constitutes a record, the remaining three cases resulting in a verdict of "not proven." The extreme penalty of £100 allowed by the Statute was inflicted in six instances, and the fines ranged from £20 up to that maximum. The total amount of fines imposed during the year was £2280, or £365 below that for 1905, but this reduction is accounted for chiefly by the fact that the full penalty was inflicted during the latter year in 16 instances, compared with six in 1906. The average amount of the fines for last year—£60—is, of course, also lower. Of the fines imposed, £1376 13s. 4d. was paid, being £99 below the total for 1905. Since prosecutions were first instituted in 1886 up to the close of the year under review the total amount of penalties imposed has been £16,621 5s., and of that, £9793 6s. 8d. has been paid. The alternative of imprisonment given last year ranged from 15 to 60 days, and 13 of the accused chose that form of punishment.

When a trawler is captured by a fishery cruiser or an Admiralty vessel fishing in territorial waters the trawler is ordered to the nearest convenient port, when the fishing gear in use at the time of capture is removed from the offending vessel and stored, pending the result of the trial of the master thereof. If the trial results in a verdict of guilty, then the gear is sold and the net proceeds lodged in Exchequer. If a verdict of "not guilty" or "not proven" is given, the gear is returned to the owners of the trawler. Last year the net amount realised for forfeited gear was £153 19s. That sum does not represent the total realised for such gear, however, as the expense of seizure, storage, &c., has to be deducted from the accepted price in many cases, and where purchasers agree to pay that expense they doubtless take such into account in estimating as to their offer. As has been pointed out in previous reports, in cases of detections made by others than the Board's cruisers or naval vessels, it is generally impracticable to seize the gear.

For some years the Moray Firth was the area of operations of the greatest number of offending trawl masters, but while nine were prosecuted last year for encroaching on that area—a considerably less number than in 1905—fourteen were prosecuted for trawling in the closed waters off Shetland and six for working in those off the Fife coast. Four of the offenders were detected in Lewis waters, one off the coast of Sutherlandshire, one near Stonehaven, one in the vicinity of Barra, one off Skye, and one near the island of Cara, Argyllshire.

Of the 38 masters prosecuted last year, nine of them were in charge of foreign vessels when detected, and these vessels were all fishing in the Moray Firth and flying the Norwegian flag. Convictions resulted in every case. This number is much below that for 1905, when 24 "foreigners" were proceeded against for illegal fishing.

Appendix L, No II., is a summary of details of prosecutions for illegal trawling undertaken from 1886 to 1906.

During last year a prosecution was instituted for a breach of the Lighting Regulations which resulted in the accused being fined £5, with the alternative of 30 days' imprisonment, an alternative which was chosen. There were also two cases of prosecutions for breaches of the Regulations for Registration of Sea Fishing Boats, when the accused were each fined £20, but they both chose imprisonment. (See Appendix L, No. IV., for details of these three cases.)

INJURIES SUSTAINED BY THE BOATS OR GEAR OF FISHERMEN.

The highest number of cases of injuries sustained by the boats or gear of fishermen dealt with by the Board's officers, since the passing of the Sea Fisheries (Scotland) Amendment Act, 1885, providing for their doing so, was that for 1888, when 128 complaints were inquired into. The number has gradually fallen year by year, with one or two exceptions, until for last year it stood at the remarkably low figure of 27.

Of these cases there were nine of loss of or damage to lines, and a similar number affecting nets, the remainder being complaints of damaged gear or collisions.

For some years trawlers have been the chief offenders in connection with this class of offence. In 1906, however, fishing boats occupied the first place, there having been ten of such laid to their charge. Trawlers followed next with eight, that number being equally divided between British and foreign vessels. The balance of the 27 complaints were attributed to miscellaneous causes.

In 14 of the cases dealt with, the officers succeeded in arranging matters amicably, while in nine of them the complainants took no further steps, probably because they were either partly at fault themselves or their grounds of complaint were too slender to justify further procedure. At the close of the year there were two claims remaining unsettled.

The amount of damage assessed by the Board's officers was about £124, and a fair proportion of that amount was recovered. In addition, the lines carried away were returned to the owners in two instances, and in another a mutual arrangement was arrived at.

Fourteen of the cases of loss or damage caused took place outside territorial waters.

The fact that the number of such complaints submitted to the Board's officers for adjudication has fallen to the low figure of 27 surely indicates that the men following a seafaring occupation are exhibiting greater regard for each other's property, and that they are becoming better acquainted with the law on the subject.

Details of the foregoing will be found in Appendix L, No. 1.

LOANS TO FISHERMEN.

At the close of 1905, of the 246 loans made by the Board to fishermen, between 1888 and 1890, six remained open, *i.e.* the boats upon which the money had been advanced still remained in the hands of the borrowers. These six were reduced by two during last year, one—that of an advance of £288 made to a Lewis crew of fishermen in May 1890 having been fully repaid; the other was a case where a loan of £312 had been granted in August 1889 to a crew of Golspie fishermen and where the borrowers ultimately stated that they could not pay anything further towards their arrears, which rendered it necessary for the Board to foreclose under their powers as mortgagees. The boat conveyed in security for the loan realised £40, but £4 14s. 1d. was incurred as expenses in connection with the seizure, sale, &c., thereof, and the loss of principal made was £65 15s. 3d.

Of the total amount advanced—£30,111 16s. 7d.—there had been recovered at 31st December last £23,707 12s. 3d., which, together with the interest received—£3673 15s. 6d.—makes a total of £27,381 7s. 9d. realised on account of loans. Of the monies recovered, £21,600 1s. 6d. represents principal and interest paid direct by the borrowers themselves, while £5169 9s. 6d. is the net amount recovered by the Board for seized or surrendered boats, £611 16s. 9d. being the sum obtained from insurance companies for wrecked boats.

The arrears, including interest, at the close of the year stood at £7149 9s. 10d. Of that sum, £6243 18s. 8d. of principal has been written off as against the assets of the Local Loans Fund.

Of the total number of advances made, 117 have been fully discharged, and should a good fishing be met with during the summer and autumn of the present year, it may fairly be anticipated that at least two of the four crews who still retain their boats will be in a position to discharge their obligations to the Board.

We have the honour to be,

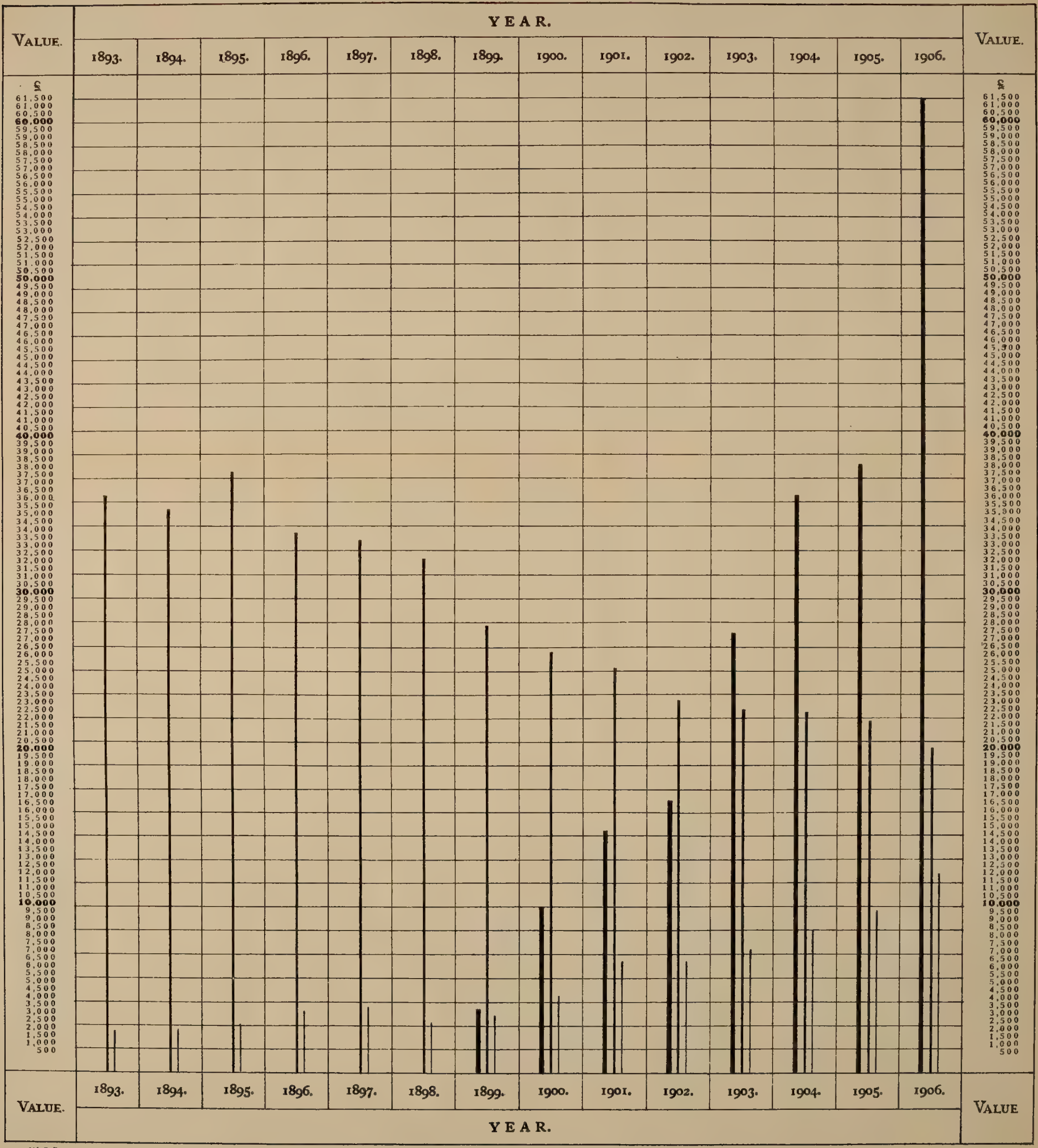
SIR,

Your most obedient Servants,

ANGUS SUTHERLAND, *Chairman.*
D. CRAWFORD, *Deputy-Chairman.*
D'ARCY W. THOMPSON.
W. R. DUGUID.
L. MILLOY.
D. MEARNS.
H. WATSON.

WM. C. ROBERTSON, *Secretary.*

CHART showing for each year of the period (1) from 1893 to 1906, inclusive, the Value of Great Lines employed on board East Coast (*a*) Sailing Boats and (*b*) Steam Vessels, and (2) from 1899 to 1906, inclusive, the Value of Drift Nets employed on board East Coast Steam Vessels.



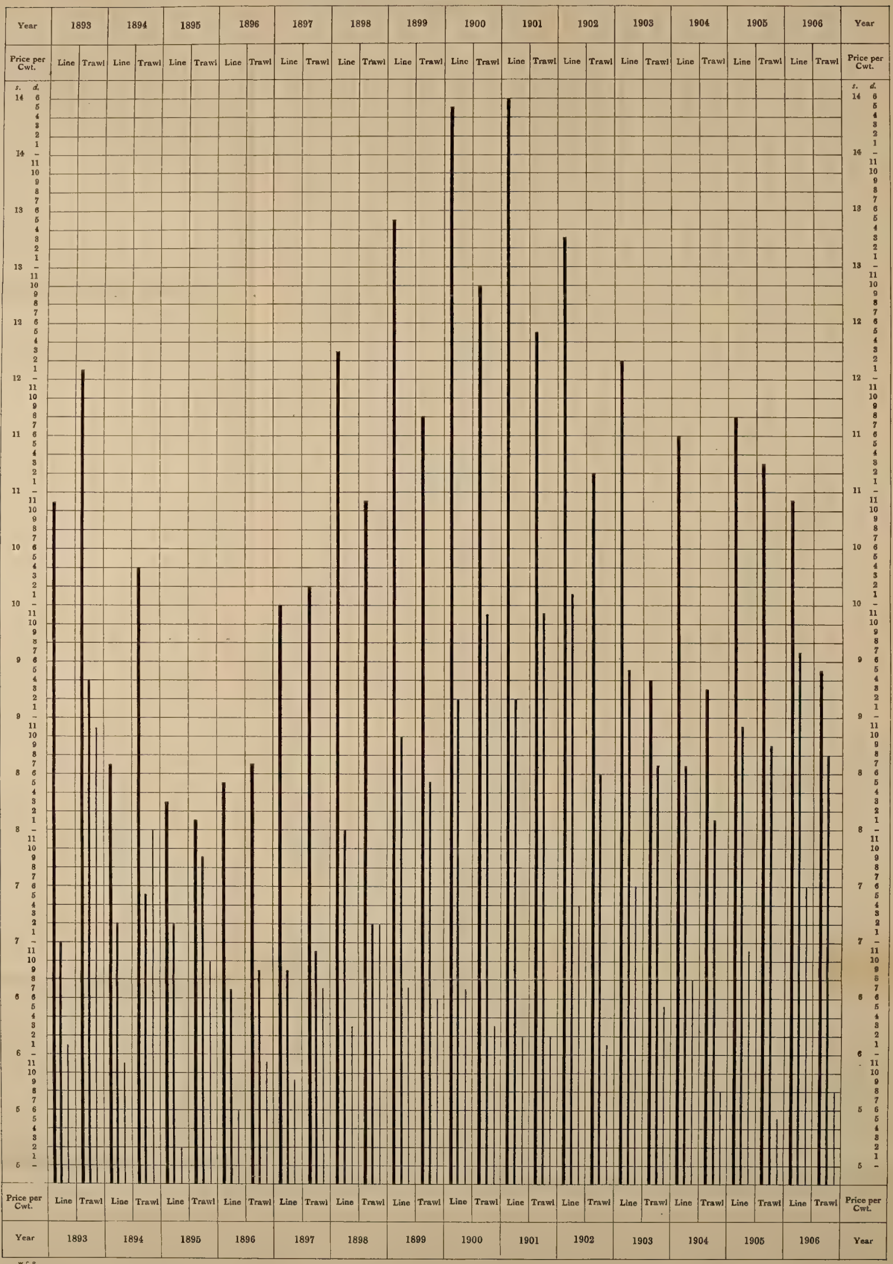
W. C. R.

Thickest lines represent value of Drift Nets employed on board East Coast Steam Vessels.

Medium do.——do.——Great Lines do.——do.——Sailing Boats.

Thinnest do.——do.——do.——do.——do.——Steam Vessels.

CHART shewing the Price per Cwt. of (1) Haddocks, (2) Cod, and (3) Ling, taken by (a) Line, and (b) Trawl, and Landed in Scotland during each of the years from 1893 to 1906, inclusive.



W C R.

The lines of greatest breadth represent the prices per cwt. of haddocks taken by (1) line, and (2) trawl.
Do. medium breadth do. do. cod do. do.
Do. least breadth do. do. ling do. do.

The average annual prices per cwt. are:—

	Line.	Trawl.
Haddocks	10/4	10/7
Cod	8/–	8/6
Ling . : . :	6/3	6/1

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APPENDIX A.—

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No.	DISTRICTS.	FISHING BOATS AND VESSELS						
		Propelled by Sails or Oars.						
		Number.	Tonnage.	Value of Boats and Fishing Gear.				
				Boats.	Nets.			
					Drift.	Seine.	Other Kinds.	Total.
	EAST COAST.			£	£	£	£	£
1	Eyemouth	147	3,023	32,323	19,560	..	..	19,560
2	Leith, ...	425	5,655	50,693	21,930	906	1,819	24,655
3	Anstruther, ...	488	10,218	87,039	58,408	..	507	58,915
4	Montrose, ...	432	5,133	27,310	12,426	..	788	13,214
5	Stonehaven, . . .	97	928	3,847	2,163	..	..	2,163
6	Aberdeen, ...	142	1,371	7,700	4,990	500	..	5,490
7	Peterhead, ...	256	4,651	47,193	27,780	..	42	27,822
8	Fraserburgh, . . .	593	10,734	109,728	60,165	..	..	60,165
9	Banff, ...	407	7,119	55,043	28,823	..	136	28,959
10	Buckie, ...	587	17,701	168,506	61,880	..	85	61,965
11	Findhorn, ...	338	8,064	86,504	53,518	..	60	53,578
12	Cromarty, ...	192	1,664	12,867	6,610	48	..	6,658
13	Helmsdale, ...	133	1,308	4,616	4,545	..	..	4,545
14	Lybster, ...	78	1,225	2,879	3,255	..	..	3,255
15	Wick, ...	519	5,395	28,905	20,786	..	60	20,846
	East Coast Totals carried down, . . .	4,834	84,189	725,153	386,839	1,454	3,497	391,790
	Orkney and Shetland.							
16	Orkney, . . .	456	2,644	8,850	5,700	..	..	5,700
17	Shetland, ...	840	11,790	97,841	30,334	..	..	30,334
	Orkney and Shetland Totals carried down,	1,296	14,434	106,691	36,034	..	..	36,034
	WEST COAST.							
18	Stornoway, ...	585	5,522	30,647	16,642	..	50	16,692
19	Barra, ...	285	1,548	4,871	5,147	..	..	5,147
20	Loch Broom, . . .	391	1,662	7,048	6,205	..	1,040	7,245
21	Loch Carron and Skye, .	612	2,085	6,725	9,054	48	532	9,634
22	Fort-William, . . .	296	707	2,656	1,421	31	156	1,608
23	Campbeltown, . . .	358	1,470	8,559	1,696	4,550	436	6,682
24	Inveraray, ...	301	1,532	11,159	4,176	4,000	150	8,326
25	Rothesay, ...	172	422	2,867	1,345	391	190	1,926
26	Greenock, ...	195	404	1,798	360	120	231	711
27	Ballantrae, ...	344	797	5,849	2,030	337	2,476	4,843
	West Coast Totals carried down, . . .	3,539	16,149	82,179	48,076	9,477	5,261	62,814
	Totals brought down.							
	East Coast, ...	4,834	84,189	725,153	386,839	1,454	3,497	391,790
	Orkney and Shetland, .	1,296	14,434	106,691	36,034	..	..	36,034
	West Coast, . . .	3,539	16,149	82,179	48,076	9,477	5,261	62,814
	Grand Totals for 1906, .	9,669	114.772	914,023	470.949	10,931	8,758	490,638
	Grand Totals for 1905, .	10.038	119,133	956,771	486,762	10,848	8,773	506,383
	Increase in 1906, . .	..	..	..	..	83	..	..
	Decrease in 1906, . .	369	4,361	42,748	15,813	..	15	15,745

No. I.

Districts to which they belong, the Number of Persons engaged in the Capture of Fish off and Vessels employed (excluding Beam and Otter Trawl Vessels), and the Extent and

(EXCLUDING BEAM AND OTTER TRAWL VESSELS).

Propelled by Sails or Oars.—(*Contd.*)							
Value of Boats and Fishing Gear.—(*Contd.*)							No.
Lines.				Bush and Buoy Ropes and Stoppers.	Crab and Lobster Creels.	Grand Total.	
Great.	Small.	Hand.	Total.				
£	£	£	£	£	£	£	
128	984	33	1,145	6,808	534	60,370	1
643	4,014	60	4,717	5,782	927	86,774	2
3,354	800	63	4,217	14,501	679	165,351	3
1,132	4,237	15	5,384	4,463	780	51,151	4
393	1,846	34	2,273	1,523	282	10,088	5
200	3,285	32	3,517	2,643	80	19,430	7
1,091	3,456	41	4,588	11,392	102	91,097	6
2,080	2,376	124	4,580	19,119	630	194,222	8
2,160	2,800	50	5,010	10,098	181	99,291	9
4,704	3,596	46	8,346	23,415	126	262,358	10
1,762	2,373	46	4,181	13,741	38	158,042	11
24	1,032	35	1,091	1,889	66	22,571	12
126	1,237	58	1,421	1,695	132	12,409	13
248	298	39	585	723	30	7,472	14
2,071	2,511	451	5,033	8,268	1,459	64,511	15
20,116	34,845	1,127	56,088	126,060	6,046	1,305,137	
200	393	207	800	1,900	1,833	19,083	16
2,068	1,638	255	3,961	20,701	6	152,843	17
2,268	2,031	462	4,761	22,601	1,839	171,926	
4,656	1,703	142	6,501	6,134	950	60,924	18
365	257	52	674	1,119	868	12,679	19
660	888	129	1,677	1,324	1,154	18,448	20
812	195	73	1,080	614	723	18,776	21
381	156	30	567	436	454	5,721	22
480	240	28	748	737	552	17,278	23
163	248	..	411	1,175	219	21,290	24
..	226	16	242	463	32	5,530	25
63	177	29	269	139	108	3,025	26
740	444	26	1,210	373	388	12,663	27
8,320	4,534	525	13,379	12,514	5,448	176,334	
20,116	34,845	1,127	56,088	126,060	6,046	1,305,137	
2,268	2,031	462	4,761	22,601	1,839	171,926	
8,320	4,534	525	13,379	12,514	5,448	176,334	
30,704	41.410	2,114	74,228	161,175	13,333	1,653,397	
32,781	43,549	2,138	78,468	165,754	13.272	1,720,648	
..	..	..	..	..	61	..	
2,077	2,139	24	4,240	4,579	..	67,251	

APPENDIX A.—

MEANS OF CAPTURE.—RETURN, for the Year 1906, showing, under the different Scottish Coasts; the Number, Tonnage, and Value of the Sailing Boats and Fishing Gear.—(*Contd.*)

No.	DISTRICTS.	FISHING BOATS AND VESSELS			
		Propelled by Sails or Oars.—(*Contd.*)			
		Area of Netting in Square Yards.			
		Drift	Seine.	Other Kinds.	Total.
	EAST COAST.				
1	Eyemouth,	5,868,000	..	..	5,868,000
2	Leith,	6,851,550	126,870	332,720	7,311,140
3	Anstruther,	20,039,400	..	82,412	20,121,812
4	Montrose,	4.260,000	..	157,014	4,417,014
5	Stonehaven,	750,000	..	..	750,000
6	Aberdeen,	1,822,800	15,000	..	1,837,800
7	Peterhead,	8,334,000	..	75,600	8,409,600
8	Fraserburgh,	20,628,000	..	..	20,628,000
9	Banff,	9,882,000	..	37,000	9,919,000
10	Buckie,	21,216,000	..	34,000	21,250,000
11	Findhorn,	19,417,600	..	19,000	19,436.600
12	Cromarty,	2,312,000	7,560	..	2,319.560
13	Helmsdale,	1,969,500	..	..	1,969,500
14	Lybster,	1,410,500	..	..	1,410,500
15	Wick,	7,791,200	..	6,400	7,797,600
	East Coast Totals carried down,	132,552,550	149,430	744,146	133,446,126
	Orkney and Shetland.				
16	Orkney,	2,470,000	..	..	2,470,000
17	Shetland,	10,398,000	..	..	10,398,000
	Orkney and Shetland Totals carried down,	12,868,000	..	..	12,868,000
	WEST COAST.				
18	Stornoway,	7,106,400	..	17,500	7,123,900
19	Barra,	1,708,960	..	..	1,708.900
20	Loch Broom,	2,530,800	..	360,000	2,890,800
21	Loch Carron and Skye,	3,018,000	40,000	193,320	3,251,320
22	Fort-William,	616,000	4,800	41,600	662.400
23	Campbeltown,	780,500	910,000	210,400	1,900.900
24	Inveraray,	1,392,000	880,000	30,000	2,302.000
25	Rothesay,	565,000	132,000	94,000	791.000
26	Greenock,	175,680	35,000	76,100	286.780
27	Ballantrae,	1,015,000	77,650	441,530	1,534.180
	West Coast Totals carried down,	18,908,280	2,079,450	1,464,450	22,452,180
	Totals brought down.				
	East Coast,	132.552,550	149,430	744,146	133,446,126
	Orkney and Shetland,	12,868,000	..	..	12,868,000
	West Coast,	18,908,280	2,079,450	1,464,450	22,452,180
	Grand Totals for 1906,	164,328,830	2,228,880	2,208,596	168,766.306
	Grand Totals for 1905,	169,589.230	2,288,680	2,209.640	174,087,550
	Increase in 1906,	..	..	..	..
	Decrease in 1906.	5,260,400	59,800	1,044	5,321,244

No. I.—*continued.*

Districts to which they belong, the Number of Persons engaged in the Capture of Fish off the Vessels employed (excluding Beam and Otter Trawl Vessels), and the Extent and Value of

(EXCLUDING BEAM AND OTTER TRAWL VESSELS)—(*Continued.*)

Propelled by Sails or Oars.—(*Contd.*)

Length of Lines in Yards.				Bush and Buoy Ropes and Stoppers in Yards.	Number of Crab and Lobster Creels.	Number of Fishermen and Boys.			No.
Great.	Small.	Hand.	Total.			Resident.	Non-Resident.	Total.	
102,000	590.400	32.700	725,100	330,460	3.050	598	14	612	1
423,080	2,032,800	25,740	2,481.620	520,593	6,165	1,321	24	1,345	2
2,012,400	480,000	50,820	2,543,220	863,362	5,420	1,413	455	1,868	3
750,480	2,837,160	24,420	3,612,060	427,380	5,180	1,010	..	1,010	4
256,320	1,021,120	30,480	1,307,920	190,030	1,880	256	..	256	5
120,000	2,006,400	19,320	2,145,720	176,680	420	367	..	367	6
610,680	1,854,720	32,760	2,498,160	505,068	510	630	121	751	7
1,485,600	1,678,320	118,800	3,282,720	1,048,900	3,150	1,509	75	1,584	8
1,296,000	1,680.000	59,280	3,035,280	729,596	1,199	1,178	34	1,212	9
2,822,400	2,157,600	111,240	5,091,240	1,428,050	630	1,863	..	1,863	10
847,200	1,170,240	36,060	2,053,440	851,380	210	1,251	9	1,260	11
23,040	743,040	19,860	785,940	187,140	440	726	..	726	12
100.800	712,800	27,780	841,380	155,500	880	355	..	355	13
178,560	171,360	31,440	381,360	50,660	285	306	20	326	14
993,840	855,240	362,160	2.211,240	617,680	5,830	1,809	220	2,029	15
12,022,400	19,991,200	932,800	32,996,400	8,082,479	35,249	14,592	972	15,564	
115,200	282,960	198,720	596,880	152,000	12,220	1,235	..	1,235	16
1,983,600	1,309,680	204,120	3,497,400	981,350	40	3,085	..	3,085	17
2,098,800	1,592,640	402,840	4,094,280	1,133,350	12,260	4,320	..	4,320	
3,315,360	1,547,760	113,960	4,977,080	708,004	7,600	4,113	..	4,113	18
174,600	77,640	40,140	292,380	316,780	5,786	965	..	965	19
360.000	444.000	77,400	881,400	131,900	5.820	1,235	..	1,235	20
623,040	155,520	85,980	864,540	276,480	4.820	1,433	..	1,433	21
184,920	74,640	22,740	282,300	52.006	2,270	585	..	585	22
262,320	143.440	17,520	423,280	218,710	3,190	752	..	752	23
97,500	156,240	..	253,740	193,122	1,240	829	..	829	24
..	113,000	8,880	121,880	48,980	320	235	..	235	25
30,240	168,000	19,050	217,290	21.200	620	256	..	256	26
532,800	266,400	8,010	807,210	120,120	2,590	583	..	583	27
5,580,780	3,146,640	393,680	9,121,100	2,087,302	34,256	10,986	..	10,986	
12,022,400	19,991,200	982,800	32.996,400	8,082,479	35,249	14,592	972	15,564	
2,098,800	1,592,640	402,840	4,094,280	1,133.350	12,260	4,320	..	4,320	
5,580,780	3,146,640	393,680	9,121,100	2,087,302	34,256	10,986	..	10,986	
19,701,980	24,730,480	1,779,320	46,211,780	11,303,131	81.765	29,898	972	30,870	
20,932,220	25,973,860	1,810,210	48,716,290	11,681,999	80,270	30,691	1,046	31,737	
..	..	..	..	..	1,495	..	..	..	
1,230.240	1,243,380	30,890	2,504,510	378,868	..	793	74	867	

APPENDIX A.—

MEANS OF CAPTURE.—RETURN, for the Year 1906. showing, under the different Districts to the Number, Tonnage, and Value of the Steam Vessels employed (excluding Beam

No.	DISTRICTS.	STEAM FISHING VESSELS (EXCLUDING						
		SCOTTISH.						
		Number.	Tonnage.	Value.				
				Vessels.	Fishing Gear.			Total.
					Nets.	Lines.	Bush and Buoy Ropes.	
	EAST COAST.			£	£	£	£	£
1	Eyemouth,	..	..	..	..	..	..	..
2	Leith,	5	168	15,000	400	141	185	15,726
3	Anstruther,	17	231	24,690	2,524	888	840	28,942
4	Montrose,	2	56	3,200	385	47	171	3,803
5	Stonehaven,	..	..	..	..	..	..	..
6	Aberdeen,	48	1,455	78,025	7,683	4,754	4,743	95,205
7	Peterhead,	49	1,120	127.400	12,740	1,919	6,644	148,703
8	Fraserburgh,	3	56	8,400	630	120	210	9,360
9	Banff,	14	319	34,400	2,207	210	798	37,615
10	Buckie,	93	2,130	224,200	26,040	2,325	6,696	259,261
11	Findhorn,	19	488	46,250	4,614	540	1,265	52,669
12	Cromarty,	..	..	..	..	..	..	..
13	Helmsdale,	9	210	16,245	2,160	360	864	19,629
14	Lybster,	..	..	..	..	..	..	..
15	Wick,	13	292	29,900	2,060	603	800	33,363
	East Coast Totals carried down,	272	6,525	607,710	61,443	11,907	23,216	704,276
	Orkney and Shetland.							
16	Orkney,	..	..	..	..	..	..	..
17	Shetland,	..	..	..	..	..	..	..
	Orkney and Shetland Totals carried down,	..	..	..	..	..	..	..
	WEST COAST.							
18	Stornoway,	..	..	..	..	..	..	..
19	Barra,	..	..	..	..	..	..	..
20	Loch Broom,	..	..	..	..	..	..	..
21	Loch Carron and Skye,	..	..	..	..	..	..	..
22	Fort-William,	..	..	..	..	..	..	..
23	Campbeltown,	..	..	..	..	..	..	..
24	Inveraray,	..	..	..	..	..	..	..
25	Rothesay,	..	..	..	..	..	..	..
26	Greenock,	..	..	..	..	..	..	..
27	Ballantrae,	2	13	350	..	20	2	372
	West Coast Totals carried down,	2	13	350	..	20	2	372
	Totals brought down.							
	East Coast,	272	6,525	607,710	61,443	11,907	23,216	704,276
	Orkney and Shetland,	..	..	..	..	..	..	..
	West Coast,	2	13	350	..	20	2	372
	Grand Totals for 1906,	274	6,538	608,060	61,443	11,927	23,218	701.648
	Grand Totals for 1905,	209	5,177	452,080	38,220	9,653	16,454	516.407
	Increase in 1906,	65	1,361	155,980	23,223	2,274	6,764	188,241
	Decrease in 1906,	..	..	..	..	..	..	..

No. I.—*continued.*

which they belong, the Number of Persons engaged in the Capture of Fish off the Scottish Coasts; and Otter Trawl Vessels); and the Extent and Value of Fishing Gear.

BEAM AND OTTER TRAWL VESSELS).

SCOTTISH.						DISTRICTS.	No.
Extent of Fishing Gear.			Number of Fishermen and Boys.				
Nets.	Lines.	Bush and Buoy Ropes.	Resident.	Non-Resident.	Total.		
Square Yards.	Yards.	Yards.				**EAST COAST.**	
..	..	..	..	..	..	Eyemouth.	1
120,000	93,900	7,440	45	..	45	Leith.	2
1,008,000	529,200	46,480	132	..	132	Anstruther.	3
132,000	31,500	7,000	18	..	18	Montrose.	4
..	..	..	..	..	..	Stonehaven.	5
2,721,800	2,131,200	187,140	479	..	479	Aberdeen.	6
3,822,000	1,097,600	265,000	294	85	379	Peterhead.	7
216,000	86,400	13,200	24	..	24	Fraserburgh.	8
756,000	126,000	48,440	112	..	112	Banff.	9
7,812,000	1,116,000	368,280	798	..	798	Buckie.	10
1,682,300	259,200	71,530	171	..	171	Findhorn.	11
..	..	..	..	..	..	Cromarty.	12
702,000	144,000	33,120	81	..	81	Helmsdale.	13
..	..	..	..	..	..	Lybster.	14
719,200	294,840	54,340	78	26	104	Wick.	15
19,691,300	5,909,840	1,101,970	2,232	111	2,343	East Coast Totals carried down.	
						Orkney and Shetland.	
..	..	..	..	..	..	Orkney.	16
..	..	..	..	..	..	Shetland.	17
..	..	..	..	..	..	Orkney and Shetland Totals carried down.	
						WEST COAST.	
..	..	..	..	..	..	Stornoway.	18
..	..	..	..	..	..	Barra.	19
..	..	..	..	..	..	Loch Broom.	20
..	..	..	..	..	..	Loch Carron and Skye.	21
..	..	..	..	..	..	Fort-William.	22
..	..	..	..	..	..	Campbeltown.	23
..	..	..	..	..	..	Inveraray.	24
..	..	..	..	..	..	Rothesay.	25
..	..	..	..	..	..	Greenock.	26
..	14,400	720	4	..	4	Ballantrae.	27
..	14,400	720	4	..	4	West Coast Totals carried down.	
						Totals brought down.	
19,691,300	5,909,840	1,101,970	2,232	111	2,343	East Coast.	
..	..	..	..	..	..	Orkney and Shetland.	
..	14,400	720	4	..	4	West Coast.	
19,691,300	5,924,240	1,102,690	2,236	111	2,347	Grand Totals for 1906.	
12,499,420	4,778,340	774,546	1,647	100	1,747	Grand Totals for 1905.	
7,191,880	1,145,900	328,144	589	11	600	Increase in 1906.	
..	..	..	..	..	..	Decrease in 1906.	

APPENDIX A.—

MEANS OF CAPTURE.—RETURN, for the Year 1906, showing, under the different Districts to the Number, Tonnage, and Value of the Steam Vessels employed (excluding Beam

No.	DISTRICTS.	STEAM FISHING VESSELS (EXCLUDING						
		OTHER THAN SCOTTISH.						
		Number.	Tonnage.	Value.				
				Vessels.	Fishing Gear.			Total.
					Nets.	Lines.	Bush and Buoy Ropes.	
	EAST COAST.			£	£	£	£	£
1	Eyemouth,	..	..	..	..	..	..	..
2	Leith,	..	..	..	..	..	..	..
3	Anstruther,	..	..	..	..	..	..	..
4	Montrose,	..	..	..	..	..	..	.
5	Stonehaven,	..	..	..	..	..	..	..
6	Aberdeen,	2	64	4,410	..	240	15	4,665
7	Peterhead,	3	74	7,800	720	45	410	8,975
8	Fraserburgh,	..	..	..	..	..	..	..
9	Banff,	..	..	..	..	..	..	..
10	Buckie,	3	60	5,000	840	..	210	6,050
11	Findhorn,	..	..	..	..	..	..	..
12	Cromarty,	..	..	..	..	..	..	..
13	Helmsdale,	..	..	..	..	..	..	..
14	Lybster,	..	..	..	..	..	..	..
15	Wick,	15	330	34,500	2,400	..	900	37,800
	East Coast Totals carried down,	23	528	51,710	3,960	285	1,535	57,490
	Orkney and Shetland.							
16	Orkney,	..	..	..	..	..	..	..
17	Shetland,	248	7,440	496,000	58,000	..	24,800	578,800
	Orkney and Shetland Totals carried down.	248	7,440	496,000	58,000	..	24,800	578,800
	WEST COAST.							
18	Stornoway,	..	..	..	..	..	..	..
19	Barra,	..	..	..	..	..	..	..
20	Loch Broom,	..	..	..	..	..	..	..
21	Loch Carron and Skye,	..	..	..	..	..	..	..
22	Fort-William,	..	..	..	..	..	..	..
23	Campbeltown,	..	..	..	..	..	..	..
24	Inveraray,	..	..	..	..	..	..	..
25	Rothesay,	..	..	..	..	..	..	..
26	Greenock,	..	..	..	..	..	..	..
27	Ballantrae,	..	..	..	..	..	..	..
	West Coast Totals carried down,	..	..	..	..	..	..	..
	Totals brought down.							
	East Coast,	23	528	51,710	3,960	285	1,535	57,490
	Orkney and Shetland,	248	7.440	496,000	58,000	..	24,800	578,800
	West Coast,	..	..	..	..	..	..	..
	Grand Totals for 1906,	271	7,968	547,710	61.960	285	26,335	636,290
	Grand Totals for 1905,	..	..	..	..	..	..	..
	Increase in 1906,	271	7.968	547,710	62,330	285	26,335	636,290
	Decrease in 1906,	..	..	..	..	..	..	..

No. I.—*continued.*

which they belong, the Number of Persons engaged in the Capture of Fish off the Scottish Coasts; and Otter Trawl Vessels); and the Extent and Value of Fishing Gear.—(*Contd.*)

BEAM AND OTTER TRAWL VESSELS).							
OTHER THAN SCOTTISH.						DISTRICTS	No.
Extent of Fishing Gear.			Number of Fishermen and Boys.				
Nets.	Lines.	Bush and Buoy Ropes.	Resident.	Non-Resident.	Total.		
Square Yards.	Yards.	Yards.				**EAST COAST.**	
..	..	..	..	..	..	Eyemouth.	1
..	..	..	..	..	..	Leith.	2
..	..	..	..	..	..	Anstruther.	3
..	..	..	..	..	..	Montrose.	4
..	..	..	..	..	..	Stonehaven.	5
..	115,200	1,440	18	..	18	Aberdeen.	6
216,000	25,200	13,760	5	18	23	Peterhead.	7
..	..	..	..	..	..	Fraserburgh.	8
..	..	..	..	..	..	Banff.	9
252,000	..	9,780	21	6	27	Buckie.	10
..	..	..	..	..	..	Findhorn.	11
..	..	..	..	..	..	Cromarty.	12
..	..	..	..	..	..	Helmsdale.	13
..	..	..	..	..	..	Lybster.	14
780,000	..	51,900	..	135	135	Wick.	15
1,248,000	140,400	76,880	44	159	203	East Coast Totals carried down.	
						Orkney and Shetland.	
..	..	..	..	..	..	Orkney.	16
14,880,000	..	992,000	..	2,480	2,480	Shetland.	17
14,880,000	..	992,000	..	2,480	2,480	Orkney and Shetland Totals carried down.	
						WEST COAST.	
..	..	..	..	..	..	Stornoway.	18
..	..	..	..	..	..	Barra.	19
..	..	..	..	..	..	Loch Broom.	20
..	..	..	..	..	..	Loch Carron and Skye.	21
..	..	..	..	..	..	Fort-William.	22
..	..	..	..	..	..	Campbeltown.	23
..	..	..	..	..	..	Inveraray.	24
..	..	..	..	..	..	Rothesay.	25
..	..	..	..	..	..	Greenock.	26
..	..	..	..	..	..	Ballantrae.	27
..	..	..	..	..	..	West Coast Totals carried down.	
						Totals brought down.	
1,248,000	140,400	76,880	44	159	203	East Coast.	
14,880,000	..	992,000	..	2,480	2,480	Orkney and Shetland.	
..	..	..	..	..	..	West Coast.	
16,128,000	140,400	1,068,880	44	2,639	2,683	Grand Totals for 1906.	
..	..	..	..	..	..	Grand Totals for 1905.	
16,128,000	140,400	1,068,880	44	2,639	2,683	Increase in 1906.	
..	..	..	..	..	..	Decrease in 1906.	

APPENDIX A.—

MEANS OF CAPTURE.—RETURN, for the Year 1906, showing, under the different Districts to the Number, Tonnage, and Value of the Steam Vessels employed (excluding Beam

No.	DISTRICTS.	STEAM FISHING VESSELS (EXCLUDING						
		TOTALS.						
		Number	Tonnage	Value.				
				Vessels.	Fishing Fear.			Total.
					Nets.	Lines.	Bush and Buoy Ropes.	
	EAST COAST.			£	£	£	£	£
1	Eyemouth, ...	..	..	..	..	..	..	..
2	Leith, ...	5	168	15,000	400	141	185	15,726
3	Anstruther, ...	17	231	24,690	2,524	888	840	28,942
4	Montrose, ...	2	56	3,200	385	47	171	3,803
5	Stonehaven, ...	..	..	..	..	..	..	.
6	Aberdeen, ...	50	1,519	82,435	7,683	4,994	4,758	99,870
7	Peterhead, . , . .	52	1,194	135,200	13,460	1,964	7,054	157,678
8	Fraserburgh, . . .	3	56	8,400	630	120	210	9,360
9	Banff, ...	14	319	34,400	2,207	210	798	37,615
10	Buckie, ...	96	2,190	229,200	26,880	2,325	6,906	265,311
11	Findhorn, ...	19	488	46,250	4,614	540	1,265	52,669
12	Cromarty, ...	..	.	..	..	..	..	..
13	Helmsdale, ...	9	210	16,245	2,160	360	864	19,629
14	Lybster, ...	..	..	..	..	..	..	..
15	Wick, ...	28	622	64.400	4,460	603	1,700	71,163
	East Coast Totals carried down,	295	7,053	659,420	65,403	12,192	24,751	761,766
	Orkney and Shetland.							
16	Orkney, ...	..	..	..	..	..	..	..
17	Shetland, ...	248	7 440	496,000	58,000	..	24,800	578,800
	Orkney and Shetland Totals carried down,	248	7,440	496,000	58 000	..	24,800	578,800
	WEST COAST.							
18	Stornoway, ...	..	..	.	..	..	..	
19	Barra, ...	..	..	..	..	..	..	..
20	Loch Broom, . . .	..	.	..	..	..	..	..
21	Loch Carron and Skye,	..	..	..	..	..	..	..
22	Fort-William, . . .	..	..	..	..	..	..	..
23	Campbeltown, . . .	..	..	..	..	..	..	..
24	Inveraray, ...	..	..	..	..	..	..	..
25	Rothesay, ...	..	..	..	..	..	..	..
26	Greenock, ...	..	..	..	..	..	..	..
27	Ballantrae, ...	2	13	350	..	20	2	372
	West Coast Totals carried down,	2	13	350	..	20	2	372
	Totals brought down.							
	East Coast, ...	295	7,053	659,420	65,403	12,192	24.751	761,766
	Orkney and Shetland, .	248	7,440	496,000	58,000	..	24,800	578,800
	West Coast, ...	2	13	350	..	20	2	372
	Grand Totals for 1906, .	545	14,506	1,155,770	123,403	12,212	49,553	1,340,938
	Grand Totals for 1905, .	209	5,177	452,080	38,220	9,653	16,454	516.407
	Increase in 1906, . .	336	9,329	703,690	85,183	2,559	33,099	824,531
	Decrease in 1906, . .	..	..	..	..	..	..	..

Note.—Totals for 1905 are exclusive of " Steam Fishing Vessels other

No. I.—*continued.*

which they belong, the Number of Persons engaged in the Capture of Fish off the Scottish Coasts; and Otter Trawl Vessels); and the Extent and Value of Fishing Gear.—(*Contd.*)

BEAM AND OTTER TRAWL VESSELS).

TOTALS.						DISTRICTS	No
Extent of Fishing Gear.			Number of Fishermen and Boys.				
Nets	Lines.	Bush and Buoy Ropes.	Resident.	Non-Resident.	Total.		
Square Yards.	Yards.	Yards.				**EAST COAST.**	
..	..	..	..	..	..	Eyemouth.	1
120,000	93,900	7,440	45	..	45	Leith.	2
1,008,000	529,200	46,480	132	..	132	Anstruther.	3
132,000	31,500	7,000	18	..	18	Montrose.	4
..	..	..	..	..	..	Stonehaven.	5
2,721,800	2,246,400	188,580	497	..	497	Aberdeen.	6
4,038,000	1,122,800	278,760	299	103	402	Peterhead.	7
216,000	86,400	13,200	24	..	24	Fraserburgh.	8
756,000	126,000	48,440	112	..	112	Banff.	9
8,064,000	1,116,000	378,060	819	6	825	Buckie.	10
1,682,300	259,200	71,530	171	..	171	Findhorn.	11
..	..	..	..	..	..	Cromarty.	12
702,000	144,000	33,120	81	..	81	Helmsdale.	13
..	..	..	..	..	..	Lybster.	14
1,499,200	294,840	106,240	78	161	239	Wick.	15
20,939,300	6,050,240	1,178,850	2,276	270	2,546	East Coast Totals carried down.	
						Orkney and Shetland	
..	..	..	..	..	..	Orkney.	16
14,880,000	..	992,000	..	2,480	2,480	Shetland.	17
14,880,000	..	992,000	..	2,480	2,480	Orkney and Shetland Totals carried down.	
						WEST COAST.	
..	..	..	..	..	..	Stornoway.	18
..	..	..	..	..	..	Barra.	19
..	..	..	..	..	..	Loch Broom.	20
..	..	..	..	..	..	Loch Carron and Skye.	21
..	..	..	..	..	..	Fort-William.	22
..	..	..	..	..	..	Campbeltown.	23
..	..	..	..	..	..	Inveraray.	24
..	..	..	..	..	..	Rothesay.	25
..	..	..	..	..	..	Greenock.	26
..	14,400	720	4	..	4	Ballantrae.	27
..	14,400	720	4	..	4	West Coast Totals carried down.	
						Totals brought down.	
20,939,300	6,050,240	1,178,850	2,276	270	2,546	East Coast.	
14,880,000	..	992,000	..	2,480	2,480	Orkney and Shetland.	
..	14,400	720	4	..	4	West Coast	
35,819,300	6,064,640	2,171,570	2,280	2,750	5,030	Grand Totals for 1906.	
12,499,420	4,778,340	774,546	1,647	100	1,747	Grand Totals for 1905.	
23,319,880	1,286,300	1,397,024	633	2,650	3,283	Increase in 1906.	
..	:	..	..	..	..	Decrease in 1906.	

than Scottish," statistics of which are given for the first time this year.

APPENDIX A.—

MEANS OF CAPTURE.—RETURN, for the Year 1906, showing, under the different Districts to Tonnage, and Value of the Boats and Vessels employed, distinguishing those propelled

No.	DISTRICTS.	BEAM AND OTTER											
		Propelled by Steam.											
		Scottish.						Other than Scottish.					
		Number.	Tonnage.	Value.			Men Engaged.	Number.	Tonnage.	Value.			Men Engaged.
				Vessels.	Fishing Gear.	Total.				Vessels.	Fishing Gear.	Total.	
	EAST COAST.			£	£	£				£	£	£	
1	Eyemouth,	..	..	..	..	..	..	..	..	..	..	..	..
2	Leith,	48	1,553	199,950	5,820	205,770	400	1	30	3,000	120	3,120	9
3	Anstruther,	..	..	..	..	..	..	..	..	..	..	..	..
4	Montrose,	14	535	48,600	1,800	50,400	110	..	..	..	..	..	..
5	Stonehaven,	..	..	..	..	..	..	..	..	..	..	..	..
6	Aberdeen,	166	8,157	675.865	23,240	699.105	1,888	18	691	56,969	2,520	59,489	152
7	Peterhead,	5	296	20,000	650	20.650	45	..	..	..	..	..	..
8	Fraserburgh,	9	509	35,100	1,340	36,440	81	..	..	..	..	..	..
9	Banff,	..	..	..	..	..	..	..	..	..	..	..	..
10	Buckie,	..	..	..	..	..	..	..	..	..	..	..	..
11	Findhorn,	..	..	..	..	..	..	..	..	..	..	..	..
12	Cromarty,	..	..	..	..	..	..	..	..	..	..	..	..
13	Helmsdale,	..	..	..	..	..	..	..	..	..	..	..	..
14	Lybster,	..	..	..	..	..	..	..	..	..	..	..	..
15	Wick,	..	..	..	..	..	..	..	..	..	..	..	..
	East Coast Totals carried down,	242	11,050	979,515	32,850	1,012.565	2,524	19	721	59,969	2,640	62,609	161
	Orkney and Shetland.												
16	Orkney,	..	..	..	..	..	..	..	..	..	..	..	..
17	Shetland,	..	..	..	..	..	..	..	..	..	..	..	..
	Orkney and Shetland Totals carried down.	..	..	..	..	..	..	..	..	..	..	..	..
	WEST COAST.												
18	Stornoway,	..	..	..	..	..	..	..	..	..	..	..	..
19	Barra,	..	..	..	..	..	..	..	..	..	..	..	..
20	Loch Broom,	..	..	..	..	..	..	..	..	..	..	..	..
21	Loch Carron and Skye,	..	..	..	..	..	..	..	..	..	..	..	..
22	Fort-William,	..	..	..	..	..	..	..	..	..	..	..	..
23	Campbeltown,	..	..	..	..	..	..	..	..	..	..	..	..
24	Inveraray,	..	..	..	..	..	..	..	..	..	..	..	..
25	Rothesay,	..	..	..	..	..	..	..	..	..	..	..	..
26	Greenock,	12	690	40,000	1,800	41,800	96	..	..	..	..	..	..
27	Ballantrae,	..	..	..	..	..	..	1	11	1,800	20	1,820	7
	West Coast Totals carried down,	12	690	40,000	1,800	41,800	96	1	11	1,800	20	1,820	7
	Totals brought down.												
	East Coast,	242	11,050	979,515	32.850	1,012,365	2,524	19	721	59,969	2,640	62,609	161
	Orkney and Shetland,	..	..	..	..	..	..	..	..	..	..	..	..
	West Coast,	12	690	40.000	1,800	41,800	96	1	11	1,800	20	1,820	7
	Grand Totals for 1906,	254	11,740	1,019,515	34.650	1.054,165	2,620	20	732	61,769	2.660	64,429	168
	Grand Totals for 1905,	244	10,984	964,670	32,920	997.590	2,325	22	731	62.300	2,9'0	65.240	183
	Increase in 1906,	10	756	54,845	1730	56,575	295	..	1	..	..	..	..
	Decrease in 1906,	..	..	..	..	..	..	2	..	531	280	811	15

Note.—The Returns relating to *Scottish* Trawlers are compiled according to the Creeks to which

No. I.—*continued.*

which they belong, the Number of Persons engaged in the Capture of Fish ; the Number, by Steam from those propelled by Sails or Oars ; and the Extent and Value of Fishing Gear.

TRAWL VESSELS.

Propelled by Sails.												Total.						No.
Scottish.						Other than Scottish												
Number.	Tonnage.	Value.			Men Engaged.	Number.	Tonnage.	Value.			Men Engaged.	Number.	Tonnage.	Value.			Men Engaged.	
		Vessels.	Fishing Gear.	Total.				Vessels	Fishing Gear.	Total.				Vessels.	Fishing Gear.	Total.		
		£	£	£				£	£	£				£	£	£		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
..	..	..	..	..	..	..	..	..	..	..	..	49	1,583	202,950	5,940	208,890	409	2
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
..	..	..	..	..	..	..	..	..	..	..	..	14	535	48,600	1,800	50,400	110	4
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
..	..	..	..	..	..	..	..	..	..	.	..	184	8,848	732,834	25,760	758,594	2,040	6
..	..	..	..	..	..	..	..	..	..	..	..	5	296	20,000	650	20,650	45	7
..	..	..	..	..	..	..	..	..	..	..	..	9	509	35,100	1,340	36,440	81	8
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	9
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15
..	..	..	..	..	..	..	..	..	..	..	..	261	11,771	1,039,484	35,490	1,074,974	2,685	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	17
.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	21
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	.	..	..	23
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	24
4	25	120	60	180	12	..	..	..	..	..	..	4	25	120	60	180	12	25
14	79	410	210	620	46	..	..	..	..	.	..	26	769	40,410	2,010	42,420	142	26
48	227	2,420	1,400	3,820	110	..	..	..	..	..	..	49	238	4,220	1,420	5,640	117	27
66	331	2,950	1,670	4,620	168	..	..	..	..	..	..	79	1,032	44,750	3,490	48,240	271	
..	..	..	..	..	..	..	..	..	..	..	..	261	11,771	1,039,484	35,490	1,074 974	2,685	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
66	331	2.950	1,670	4,620	168	..	..	..	..	..	..	79	1,032	44,750	3,490	48,240	271	
66	331	2,950	1,670	4,620	168	..	..	..	..	..	..	340	12.803	1.084,234	38,980	1.123,214	2,956	
68	360	3,090	1,720	4.810	166	..	..	..	..	..	..	334	12,075	1.030 060	37,580	1,067.640	2,674	
..	..	..	..	..	2	..	..	..	..	..	..	6	728	54,174	1,400	55,574	282	
2	29	140	50	190	..	..	..	..	..	..	..	..	..	..	..	..	..	

they belong ; but in the case of others, according to the Creeks from which they fish.

APPENDIX A.—

MEANS OF CAPTURE.—RETURN, for the Year 1906, showing, under the different
the Scottish Coasts ; the Number, Tonnage, and Value of

No.	DISTRICTS.	Steam Trawlers.					
		Number.	Tonnage.	Men Engaged.	Value of		
					Vessels.	Fishing Gear.	Total.
					£	£	£
	EAST COAST.						
1	Eyemouth,	.	.	.	.	.	.
2	Leith,	49	1,583	409	202,950	5,940	208,890
3	Anstruther,	.	.	.	.	.	.
4	Montrose,	14	535	110	48,600	1,800	50,400
5	Stonehaven,	.	.	.	.	.	.
6	Aberdeen,	184	8,848	2,040	732,834	25,760	758,594
7	Peterhead,	5	296	45	20,000	650	20,650
8	Fraserburgh,	9	509	81	35,100	1,340	36,440
9	Banff,	.	.	.	.	.	.
10	Buckie,	.	.	.	.	.	.
11	Findhorn,	.	.	.	.	.	.
12	Cromarty,	.	.	.	.	.	.
13	Helmsdale,	.	.	.	.	.	.
14	Lybster,	.	.	.	.	.	.
15	Wick,	.	.	.	.	.	.
	East Coast Totals carried down,	261	11,771	2,685	1,039,484	35,490	1,074,974
	Orkney and Shetland.						
16	Orkney,	.	.	.	.	.	.
17	Shetland,	.	.	.	.	.	.
	Orkney and Shetland Totals carried down.	.	.	.	.	.	.
	WEST COAST.						
18	Stornoway,	.	.	.	.	.	.
19	Barra,	.	.	.	.	.	.
20	Loch Broom,	.	.	.	.	.	.
21	Loch Carron and Skye,	.	.	.	.	.	.
22	Fort-William,	.	.	.	.	.	.
23	Campbeltown,	.	.	.	.	.	.
24	Inveraray,	.	.	.	.	.	.
25	Rothesay,	.	.	.	.	.	.
26	Greenock,	12	690	96	40,000	1,800	41,800
27	Ballantrae,	1	11	7	1,800	20	1,820
	West Coast Totals carried down,	13	701	103	41,800	1,820	43,620
	Totals brought down.						
	East Coast,	261	11,771	2,685	1,039,484	35,490	1,074,974
	Orkney and Shetland,	.	.	.	.	.	.
	West Coast,	13	701	103	41,800	1,820	43,620
	Grand Totals for 1906,	274	12,472	2,788	1,081,284	37,310	1,118,594
	Grand Totals for 1905,	266	11,715	2,508	1,026,970	35,860	1,062,830
	Increase in 1906,	8	757	280	54,314	1,450	55,764
	Decrease in 1906,	.	.	.	.	.	.

No. I.—*continued.*

Districts to which they belong, the Number of Persons engaged in the Capture of Fish off Steam Fishing Vessels employed ; and Value of their Fishing Gear.

OTHER STEAM FISHING VESSELS.						TOTALS OF STEAM FISHING VESSELS.						No.
Number.	Tonnage.	Men Engaged.	Value of			Number.	Tonnage.	Men Engaged.	Value of			
			Vessels.	Fishing Gear.	Total.				Vessels.	Fishing Gear.	Grand Total.	
			£	£	£				£	£	£	
.	.	.	.	.	.	.	.	.	.	.	.	1
5	168	45	15,000	726	15,726	54	1,751	454	217,950	6,666	224,616	2
17	231	132	24,690	4,252	28,942	17	231	132	24,690	4,252	28,942	3
2	56	18	3,200	603	3,803	16	591	128	51,800	2,403	54,203	4
.	.	.	.	.	.	.	.	.	.	.	.	5
50	1,519	497	82,435	17,435	99,870	234	10.367	2,537	815.269	43,195	858,464	6
52	1,194	402	135,200	22,478	157,678	57	1,490	447	155,200	23,128	178,328	7
3	56	24	8,400	960	9,360	12	565	105	43,500	2,300	45,800	8
14	319	112	34,400	3,215	37,615	14	319	112	34,400	3,215	37,615	9
96	2,190	825	229 200	36,111	265.311	96	2,190	825	229,200	36,111	265,311	10
19	488	171	46,250	6,419	52,669	19	488	171	46,250	6,419	52,669	11
.	.	.	.	.	.	.	.	.	.	.	.	12
9	210	81	16,245	3,384	19,629	9	210	81	16,245	3,384	19,629	13
.	.	.	.	.	.	.	.	.	.	.	.	14
28	622	239	64,400	6,763	71,163	28	622	239	64,400	6,763	71,163	15
295	7,053	2,546	659,420	102,346	761,766	556	18,824	5,231	1,698,904	137,836	1,836,740	
.	.	.	.	.	.	.	.	.	.	.	.	16
248	7,440	2,480	496,000	82,800	578,800	248	7,440	2,480	496,000	82,800	578,800	17
248	7,440	2,480	496,000	82,800	578,800	248	7,440	2,480	496,000	82,800	578,800	
.	.	.	.	.	.	.	.	.	.	.	.	18
.	.	.	.	.	.	.	.	.	.	.	.	19
.	.	.	.	.	.	.	.	.	.	.	.	20
.	.	.	.	.	.	.	.	.	.	.	.	21
.	.	.	.	.	.	.	.	.	.	.	.	22
.	.	.	.	.	.	.	.	.	.	.	.	23
.	.	.	.	.	.	.	.	.	.	.	.	24
.	.	.	.	.	.	.	.	.	.	.	.	25
.	.	.	.	.	.	12	690	96	40,000	1,800	41,800	26
2	13	4	350	22	372	3	24	11	2,150	42	2,192	27
2	13	4	350	22	372	15	714	107	42,150	1,842	43,992	
295	7,053	2,546	659,420	102,346	761,766	556	18,824	5,231	1,698,904	137,836	1,836,740	
248	7,440	2,480	496,000	82,800	578,800	248	7,440	2,480	496,000	82 800	578,800	
2	13	4	350	22	372	15	714	107	42,150	1,842	43,992	
545	14,506	5,030	1,155,770	185,168	1.340.938	819	26,978	7,818	2.237.054	222,478	2,459,532	
*209	5,177	1,747	452,080	64,327	516,407	475	16,892	4,255	1,479,050	100,187	1,579,237	
336	9,329	3,283	703,690	120,841	824,531	344	10,086	3,563	758,004	122,21	880,295	
.	.	.	.	.	.	.	.	.	.	.	.	

* See footnote on page 16.

APPENDIX A.—

MEANS OF CAPTURE.—RETURN, for the Year 1906, showing, under the different
the Scottish Coasts ; the Total Number, Tonnage, and Value of the Steam and

DISTRICTS.	FISHING BOATS AND				
	Propelled by Steam. Sails, or Oars.				
	Number.	Tonnage.	Value.		
			Boats and Vessels.	Fishing Gear.	Total.
EAST COAST.			£	£	£
Eyemouth, ...	147	3,023	32,323	28,047	60,370
Leith, ...	479	7,406	268,643	42,747	311.390
Anstruther, ...	505	10,449	111,729	82,564	194,293
Montrose, ...	448	5,724	79, 10	26.244	105,354
Stonehaven, ...	97	928	3,847	6,241	10,088
Aberdeen, ...	376	11,738	822.969	54,925	877,894
Peterhead, ...	313	6,141	202,393	67,032	269,425
Fraserburgh, ...	605	11,299	153.228	86,794	240,022
Banff, ...	421	7,438	89,443	47,463	136,906
Buckie, ...	683	19,891	397,706	129,963	527,669
Findhorn, ...	357	8,552	132,754	77,957	210,711
Cromarty, ...	192	1,664	12,867	9,704	22,571
Helmsdale, ...	142	1,518	20,861	11,177	32,038
Lybster, ...	78	1,225	2.879	4,593	7.472
Wick, ...	547	6,017	93,305	42,369	135,674
East Coast Totals carried down,	5,390	103,013	2,424,057	717,820	3,141,877
Orkney and Shetland.					
Orkney, ...	456	2,644	8,850	10,233	19,083
Shetland, ...	1,088	19,230	593,841	137,802	731,643
Orkney and Shetland Totals carried down, . .	1,544	21,874	602,691	148,035	750,726
WEST COAST.					
Stornoway, ...	585	5,522	30,647	30,277	60,924
Barra, ...	285	1,548	4,871	7,808	12,679
Loch Broom, ...	391	1,662	7,048	11,400	18,448
Loch Carron and Skye, . .	612	2,085	6,725	12,051	18,776
Fort-William, ...	296	707	2,656	3,065	5,721
Campbeltown, ...	358	1,470	8,559	8,719	17,278
Inveraray, ...	301	1,532	11,159	10,131	21,290
Rothesay, ...	176	447	2,987	2,723	5,710
Greenock, ...	221	1,173	42,208	3,237	45,445
Ballantrae, ...	395	1,048	10,419	8,256	18,675
West Coast Totals carried down,	3,620	17,194	127,279	97,667	224,946
Totals brought down.					
East Coast, ...	5,390	103,013	2,424,057	717.820	3,141,877
Orkney and Shetland, . .	1,544	21,874	602,691	148,035	750,726
West Coast, ...	3,620	17,194	127,279	97,667	224,946
Grand Totals for 1906, . .	10,554	142,081	3,154,027	963,522	4,117,549
Grand Totals for 1905, . .	10,581	136,385	2,438,911	865.784	3,304,695
Increase in 1906, ...	..	5,696	715,116	97,738	812,854
Decrease in 1906, ...	27	..	..	..	..

No. I.—*continued.*

Districts to which they belong, the Number of Persons engaged in the Capture of Fish off Sailing Boats and Vessels employed ; and the Extent and Value of Fishing Gear.

BEAM AND OTTER TRAWL VESSELS.

Propelled by Steam, Sails, or Oars.						
Area of Nets.	Length of Lines (including Buoy Ropes, &c.).	Crab and Lobster Creels.	Number of Fishermen and Boys.			DISTRICTS.
			Resident	Non-Resident	Total.	
Sq. Yds.	Yds.	No.				**EAST COAST.**
5,868.000	1,055,560	3,050	598	14	612	Eyemouth.
7,431,140	3,103.553	6,165	1,775	24	1,799	Leith.
21,129,812	3,982,262	5,420	1,545	455	2,000	Anstruther.
4,549,014	4,077,940	5,180	1,138	..	1,138	Montrose.
750.000	1,497.950	1,880	256	..	256	Stonehaven.
4,559,600	4,757,380	420	2,904	..	2,904	Aberdeen.
12,447.600	4,404,788	510	974	224	1,198	Peterhead.
20 844.000	4.431,220	3,150	1,614	75	1,689	Fraserburgh.
10,675,000	3.939,316	1,199	1,290	34	1,324	Banff.
29.314,000	8,013,350	630	2,682	6	2,688	Buckie.
21,118,900	3,235,550	210	1,422	9	1,431	Findhorn.
2,319,560	973,080	440	726	..	726	Cromarty.
2,671,500	1,174.000	880	436	..	436	Helmsdale.
1,410.500	432,020	285	306	20	326	Lybster.
9,296,800	3,230,000	5,830	1,887	381	2,268	Wick.
154,385,426	48,307,969	35,249	19,553	1,242	20,795	East Coast Totals carried down.
						Orkney and Shetland.
2,470,000	748,880	12,220	1,235	..	1,235	Orkney.
25,278,000	5,470,750	40	3,085	2,480	5,565	Shetland.
27,748,000	6,219,630	12,260	4,320	2,480	6,800	Orkney and Shetland Totals carried down.
						WEST COAST.
7.123.900	5,685,084	7,600	4,113	..	4,113	Stornoway.
1,708,900	609.160	5,786	965	..	965	Barra.
2,890,800	1,013,300	5,820	1,235	..	1,235	Loch Broom.
3,251,320	1,141,020	4,820	1.433	..	1,433	Loch Carron and Skye.
662.400	334,306	2,270	585	..	585	Fort-William.
1,900.900	641,990	3,190	752	..	752	Campbeltown.
2,302,000	446,862	1,240	829	..	829	Inveraray.
791,000	170,860	320	247	..	247	Rothesay.
286,780	238,490	620	398	..	398	Greenock.
1,534,180	942,450	2,590	704	..	704	Ballantrae.
22,452,180	11,223,522	34,256	11,261	..	11,261	West Coast Totals carried down.
						Totals brought down
154,385,426	48,307,969	35,249	19,553	1,242	20,795	East Coast.
27,748,000	6,219,630	12,260	4.320	2,480	6,800	Orkney and Shetland.
22,452,180	11,223,522	34,256	11,261	..	11,261	West Coast.
204.585,606	65,751,121	81,765	35,134	3,722	38,856	Grand Totals for 1906.
186,586,970	65,951,175	80,270	35,012	1,146	36,158	Grand Totals for 1905.
17,998,636	..	1,495	122	2,576	2,698	Increase in 1906.
..	200,054	..	..	..	..	Decrease in 1906

APPENDIX A.—

RETURN giving Particulars regarding the State of the Fisheries at each

Station or Creek	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No	No.	No.
Eyemouth District.																	
Amble (Northumberland),	.	.	.	.	2	7	1	1	3	8	.	.	.	14	.	6	.
Alnmouth ,,	.	.	.	.	4	13	3	6	7	19	.	.	.	.	.	9	.
Boulmer ,,	.	.	1	18	17	47	4	8	22	73	.	.	1	2	.	36	.
Craster ,,	2	40	8	93	17	35	.	.	27	168	.	11	3	.	2	39	.
Nowton ,,	.	.	2	32	12	32	6	11	20	75	2	4	.	.	.	21	.
Beadnell ,,	4	129	5	92	19	54	1	1	29	276	.	23	1	.	2	45	.
North Sunderland ,,	5	120	4	80	18	39	.	.	27	239	.	20	2	.	–3	64	.
Holy Island ,,	1	40	3	75	15	48	.	.	19	163	.	.	2	8	2	65	.

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* Persons from inland centres temporarily engaged in fishing.

No. II.

Fishing Creek or Station on the Scottish Coasts during the Year 1906.

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines and creels.	Inshore.	.	.	.	Codlings and whitings.	.	Large export of coal. Fishing of no importance.
,,	,,	.	.	.	,,	.	Salmon fishing during the summer. Line fishing prosecuted on a small scale.
Nets, lines, and creels.	,,	.	.	.	Haddocks, codlings, and crabs.	.	No herrings landed. Line and crab fishing below the average. Mostly salmon fishing during the summer.
,,	1 to 15 miles off shore.	.	.	.	Herrings, haddocks, codlings, and crabs.	4	Large increase in herrings:—4252 crans against 2047 in 1905. Line fishing under the average; increase in crabs Harbour works progressing somewhat slowly.
,,	,,	.	.	.	Haddocks, codlings, and crabs.	.	Line and crab fishing below the average.
,,	,,	.	.	.	Herrings, haddocks, codlings, and crabs.	2	Most successful herring fishing since 1882, the catch being 2750 crans. Slight decrease in line fishing, but fair increase in crabs.
,,	2 to 25 miles off shore.	.	.	.	,,	9	Chief centre for herring fishing in the English section. The catch of 31,010 crans constitutes a record. Three crews at Yarmouth herring fishing had aggregate earnings of £665. Decrease in line and crab fishing.
,,	1 to 15 miles off shore.	.	.	.	,,	2	Small herring station, only 165 crans landed. Decrease in line and crab fishing.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.																Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
Eyemouth District—continued.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Spittal (Northumberland).	1	50	1	15	8	29	.	.	10	94	1	4	.	.	.	45	.
Berwick ,,	6	208	1	20	16	56	4	8	27	292	.	.	1	27	2	76	.
English Stations—Totals.	19	587	25	425	128	360	19	35	191	1,407	3	62	10	51	11	406	.
Burnmouth (Berwickshire),	11	302	4	58	22	62	14	14	51	436	6	8	.	.	.	116	.
Eyemouth ,,	59	1,982	2	37	4	14	.	.	65	2,033	.	.	2	.	1	378	14
St. Abbs ,,	16	458	2	33	13	63	.	.	31	554	.	.	2	27	.	104	.
Scottish Stations—Totals, . .	86	2.742	8	128	39	139	14	14	147	3,023	6	8	4	27	1	598	14
English Do. do., .	19	587	25	425	128	360	19	35	191	1,407	3	62	10	51	11	406	.
Grand Totals for District,	105	3,329	33	553	167	499	33	49	338	4,430	9	70	14	78	12	1,004	14
Leith District.																	
Cove (Berwickshire),	1	36	.	.	13	39	.	.	14	75	1	14	.	.	.	27	.
Dunbar (Haddingtonshire),	3	70	1	15	26	80	.	.	30	165	.	.	4	10	.	120	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets, lines, and creels.	2 to 30 miles off shore.	.	.	.	Herrings, haddocks, codlings, and crabs.	3	Most successful herring fishing with the exception of 1884. The catch for the port was 20,718 crans. Slight increase in both line and crab fishing.
,,	2 to 30 miles off shore.	.	.	.	,,	7	
		.	.	.		27	
Nets, lines, and creels.	1 to 6 and 20 to 35 miles off shore.	3,800	2,424	1,349	Herrings, haddocks, whitings, codlings, and crabs.	1	Line fishing about the average; decrease in crabs. Most of the fishermen prosecuted the herring fishing throughout the year, from home and other ports.
,,	,,	197,365	44,304	3	Herrings, haddocks codlings, and whitings.	26	In herrings, the winter fishing exhibited a decrease, but the catch of 48,074 crans for the summer was a record one. Line fishing about the average. With a few exceptions the fishermen prosecuted the herring fishing exclusively. Orders for the building of three steam drifters have been given.
,,	,,	647	366	794	Codlings, haddocks, and crabs.	.	Line and crab fishing about the average. Most of the fishermen prosecuted the summer herring fishing from home and other ports.
		201,812	47,094	2,146		27	
		.	.	.		27	
						54	
Lines and crab creels.	From 1 to 20 miles off.	395	132	864	Crabs and codlings.	.	Crab and lobster fishing is the principal industry at this creek, line fishing being carried on only to secure bait for the crab creels.
Drift nets and lines and crab creels.	From 1 to 15 miles off.	17,000	6,355	1,485	Herrings, cod, haddocks, and crabs.	3	Net, line, and crab and lobster fisheries are carried on more or less all the year round, but the winter herring fishing is the chief branch of the fisheries prosecuted from this creek, from 30 to 40 boats landing their catches during the months from January to March.

APPENDIX A,—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	* Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Leith District—continued.																	
North Berwick (Haddingtonshire),	.	.	.	.	11	26	2	3	13	29	.	.	.	.	.	30	.
Port Seton and Cockenzie (Haddingtonshire),	79	3,002	19	200	45	220	.	.	143	3,422	.	5	.	.	.	455	18
Prestonpans ,,	4	156	.	.	4	20	.	.	8	176	.	.	1	5	.	50	.
Fisherrow (Edinburghshire),	20	760	22	176	9	45	.	.	51	981	.	3	.	.	.	175	6
Leith ,,	.	.	.	.	.	.	1	1	1	1	.	.	.	.	.	2	.
Newhaven and Granton (Edinburghshire),	6	188	.	.	51	255	17	25	74	468	.	95	1	.	.	300	.
Queensferry (Linlithgowshire),	.	.	.	.	.	.	3	17	3	17	.	.	.	.	.	8	.
Bo'ness ,,	.	.	1	16	1	2	.	.	2	18	.	.	.	.	.	6	.
Alloa (Clackmannanshire),	2	57	9	150	.	.	.	.	11	207	.	.	.	.	.	40	.
Kincardine (Fifeshire),	2	34	7	112	.	.	.	.	9	146	.	.	.	.	.	27	.
Limekilns ,,	.	.	.	.	2	5	4	6	6	11	1	1	.	.	.	8	.

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Drift nets and lines and crab creels.	Firth of Forth, and off May Island.	1.610	617	219	Haddocks, codlings, and crabs.	.	Fishermen do not depend entirely upon fishing for their livelihood. Catch of fish shows a decrease.
Drift nets, seine nets, lines, and dredges.	,,	10,386	8,012	990	Haddocks, cod, flounders, and clams.	.	Fishermen at this creek follow the herring fishing, beginning in the month of May, on the west coast of Scotland, Shetland, and East Coast, and also on the English and Irish coasts. The local fisheries are confined chiefly to net and line fishing for flounders and codlings.
Hand lines.	From 1 to 5 miles off.	283	104	41	Haddocks and codlings.	.	Of little importance as a fishing creek. Fishermen leave home to prosecute the herring fishing at different stations in Scotland, England, and Ireland.
Nets and lines.	Firth of Forth	2,951	1,947	25	Haddocks, cod, and flounders,	.	Line fishing is carried on from this creek during the spring and autumn months. Fishermen also prosecute the herring fishing in Scotland, England, and Ireland.
Hand lines.	Inshore.	630	236	398	Codlings and shell-fish.	3	Shell fish, principally mussels and clams, are obtained by Newhaven boats, for distribution to other districts for bait.
Drift, trawl, seine, and other nets, lines, and dredges.	Firth of Forth for drift, seine, and other nets. Trawling 60 to 120 miles off.	394,171	176,326	136	Herrings, sprats, cod, ling, haddocks, and flounders.	3	The chief mode of fishing from these creeks is by trawl nets. The industry is extending yearly, and the number of vessels increasing. A considerable increase in the returns of fish landed as compared with those of the previous year is shown.
Hand lines.	Firth of Forth.	.	.	29	Shell-fish.	.	Fisheries unimportant, and prosecuted only occasionally; shell-fish only landed.
Seine and pouch nets.	Upper reaches of Firth of Forth.	1,015	250	.	Sprats and codlings.	.	Fisheries unimportant.
Pouch and drag nets.	,,	1,297	776	.	Sprats, sparlings, and flounders.	.	Sprats and sparlings are the most important kinds of fish landed at this creek.
,,	,,	631	236	.	,,	.	Fishings of little importance, chiefly carried on for local consumption.
Hand lines.	Firth of Forth.	97	42	.	Codlings.	.	,,

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Leith District—continued.																	
Inverkeithing (Fifeshire)	.	.	.	.	.	.	3	8	3	8	.	.	.	.	.	5	.
Aberdour ,,	.	.	.	.	.	.	3	6	3	6	.	.	.	.	.	6	.
Burntisland ,,	.	.	.	.	3	10	4	6	7	16	.	.	2	.	.	14	.
Kinghorn ,,	.	.	.	.	3	6	11	11	14	17	.	.	.	.	.	20	.
Kirkcaldy ,,	.	.	.	.	1	3	19	21	20	24	.	.	.	2	.	35	.
Dysart & Wemyss ,,	.	.	.	.	8	16	10	20	18	36	.	9	1	.	.	38	.
Totals, . .	117	4,303	59	669	177	727	77	124	430	5,823	2	127	9	17	.	1,366	24
Anstruther District.																	
Buckhaven (Fifeshire),	30	761	5	91	28	102	10	15	73	969	3	14	.	.	6	194	.
Methil and Leven ,,	.	.	.	.	1	4	2	4	3	8	.	.	.	.	.	4	.
Largo ,,	1	15	.		8	26	8	15	17	56	.	.	.	1	.	37	10
Elie and Earlsferry (Fifeshire),	.	.	.	.	4	17	2	3	6	20	1	1	.	.	.	10	.
St Monans ,,	91	3,496	5	45	3	8	3	3	102	3.552	1	.	.	17	.	380	145

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Hand lines.	Firth of Forth.	6	2	59	Codlings and shell-fish.	.	Principally shell fish landed at this creek.
Nets and lines.	,,	257	104	.	Codlings.	.	Hand-line fishing for local consumption.
Lines.	,,	748	332	11	,,	.	Fishing of very little importance; carried on for local consumption.
Nets and lines.	,,	572	381	.	Herrings and codlings.	.	Fishing not of much importance; engaged in occasionally only.
,,	,,	1,250	607	.	,,	.	Hand-line fishing, and with nets during the first few months of the year; fishing not of much importance.
,,	,,	853	533	34	Codlings.	.	Hand-line fishing carried on occasionally; not of much importance.
		434,152	196.992	4,291		9	
Nets and lines.	Firth of Forth.	4,068	3,204	164	Herrings and haddocks.	.	The returns of fish landed at this station show an average year. Herring fishing returns show a falling off, but small-line fishing was attended by better results. Twenty-five crews were employed at herring fishing at Shields from May to September. The earnings per crew averaged £400.
Lines and creels.	,,	74	51	5	Flounders, and plaice.	.	Catch much about the same as last year.
Nets and lines.	,,	4,582	2,432	15	Herrings, haddocks, and plaice.	.	Increase in total catch. Herring fishing was more successful. Haddocks also show a substantial increase, but the flounder and plaice fishing was less satisfactory.
,,	,,	566	245	1	Herrings, cod, and haddocks.	.	Considerable falling off, principally at herring fishing. Small-line fishing shows an increase.
,,	Firth of Forth to 160 miles E. and S.E. of May Island.	35,793	12,566	49	,,	8	Slight falling off in catch, but large increase in value of fish landed, due principally to the higher prices received for herrings during the winter herring fishing. Great-line fishing received less attention.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek. 1st Class. 45 feet keel and upwards		1st Class. 30 to 45 feet keel.		2nd Class. 18 to 30 feet keel.		3rd Class. Under 18 feet keel.		Total.		Increase on 1905.		Decrease from 1905.		Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Anstruther District—continued.																	
Pittenweem (Fifeshire)	50	1,572	3	29	14	54	1	1	68	1,656	4	68	.	.	.	240	106
Anstruther and Cellardyke (Fifeshire)	95	3,130	5	55	11	45	8	14	119	3,244	.	.	3	66	2	464	194
Crail ,,	.	.	4	73	19	48	11	17	34	138	.	.	3	17	.	64	.
Kingsbarns and Boarhills ,,	.	.	.	.	.	.	5	8	5	8	1	3	.	.	.	6	.
St. Andrews ,,	5	172	14	168	22	107	4	7	45	454	5	26	.	.	7	88	.
River Eden ,,	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tayport ,,	.	.	1	20	13	28	3	5	17	53	.	.	3	9	5	18	.
Newburgh ,,	.	.	16	291	.	.	.	.	16	291	1	21	.	.	.	40	.
Totals, .	272	9,146	53	772	123	439	57	92	505	10,449	16	133	9	110	20	1,545	455

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets and lines.	Firth of Forth.	17,931	6,693	.	Herrings, cod and haddocks.	4	Large increase both in catch and value, to which herrings principally contribute. The winter herring fishing was attended by satisfactory results. Small-line fishing was also more successful.
Nets, lines, and creels.	Firth of Forth and North Sea generally.	124,734	39,521	222	Herrings, cod, lobsters, and crabs.	36	A marked increase in the total catch and value. Compared with the previous year's results both the winter and summer herring fishing returns show large increases. Great-line fishing received less attention. Small-line fishing was neglected. Shell-fish show a slight decrease.
,,	Along the coast.	4,746	2,211	1,628	Herrings, haddocks, lobsters, and crabs.	.	Falling off in catch and value of white fish. The results attending line fishing were less satisfactory than during the preceding year. Lobster and crab fishing also showed a falling off.
Creels.	,,	41	30	636	Lobsters and crabs.	.	A falling off in catch.
Nets and lines.	St. Andrews Bay to Bell Rock.	7,404	3,610	4	Cod, haddocks, and plaice.	.	The returns show an increase in the total quantity and value of fish landed. Small-line fishing was successfully prosecuted throughout the year, and the quantity and value of haddocks and whitings landed shows a very large increase. The cod net fishing was unproductive. Flounders and plaice show an increase.
Mussel dredging.	River Eden.	.	.	769	Mussels.	.	The demand for mussels for bait was good throughout the year, and the output shows an increase.
,,	Estuary of Tay.	.	.	134	,,	.	A slight increase in the quantity of mussels dredged.
Bag nets.	River Tay.	188	309	.	Sparlings and flounders.	.	A decrease in the quantity and value of fish landed. Most of the sprats caught by the crews belonging to this creek are landed at Dundee.
		200,127	70,872	3,627		48	

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Montrose District.																	
Dundee (Forfarshire),	2	31	11	222	.	.	.	.	13	253	.	.	.	.	.	34	.
Broughty Ferry, ,,	10	262	18	233	31	121	15	39	74	655	.	.	1	47	.	145	.
Westhaven ,,	.	.	.	.	1	4	3	2	4	6	.	.	.	.	.	6	.
Easthaven ,,	1	17	1	22	1	2	7	11	10	52	.	.	.	.	.	10	.
Arbroath ,	19	628	26	350	30	86	1	2	76	1,066	.	.	7	67	.	180	.
Auchmithie ,,	1	47	.	.	13	32	4	7	18	86	1	1	.	.	.	35	.
Usan ,,	.	.	.	.	1	4	5	7	6	11	.	.	1	1	.	10	.
Ferryden ,,	36	1,250	26	252	8	43	17	23	87	1,568	.	.	1	42	.	270	.
Montrose ,,	1	46	.	.	†7	14	.	.	8	60	1	46	.	.	.	22	.
Milton (Kincardine-shire),	.	.	.	.	1	1	2	3	3	4	.	.	1	1	.	6	.
Johnshaven ,,	7	228	5	41	22	85	19	31	53	385	.	.	1	71	.	80	.
Gourdon ,,	15	559	32	365	33	116	2	3	82	1,043	.	.	2	50	.	230	.
‡Totals, .	92	3,068	119	1,485	148	508	75	128	434	5,189	2	47	14	279	.	1,028	.

* Persons from inland centres temporarily engaged in fishing. † Mussel boats.

‡ *Note.*—In addition to the above, there were 14 steamers fishing from Dundee.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Bag nets and trawling.	Bag nets, river Tay ; trawling, 5 to 120 miles off.	79,784	36,914	14	Haddocks, cod, whitings, flat-fish.	2	The sprat and herring fishing in the Tay was a complete failure. There was also a slight decrease in the returns of fish landed by trawlers.
Nets and lines.	Estuary of Tay, St. Andrews Bay, and Carnoustie Bay.	3,646	1,491	1,263	Haddocks, plaice, and mussels.	.	Decrease in herrings and plaice, but increase in quantity of haddocks and mussels landed.
Lines and creels.	Along the coast.	211	82	24	Haddocks, codlings, and crabs.	.	Fishermen chiefly engaged in salmon and crab fishing.
,,	,,	43	16	155	Crabs and lobsters	.	
Nets, lines, and creels.	2 to 70 miles off.	24,048	10,503	350	Herrings, haddocks, codlings, crabs, and lobsters.	2	Decrease in quantity, but increase in value of herrings landed. Improvement in line fishing.
Lines and creels.	1 to 12 miles off.	2,226	1,456	289	Codlings, haddocks, crabs, and lobsters.	.	Increase in quantity and value of haddocks, crabs and lobsters taken.
,,	Along the coast.	966	374	83	,,	.	
Nets and lines.	2 to 70 miles off.	.	.	233	Mussels and whelks. All white fish landed at Montrose.	.	Most of the fishermen prosecuted the herring fishing, on various parts of the Scottish and English coasts, for from 6 to 9 months, and the line fishing during the rest of the year.
Trawling and mussel dredging.	4 to 80 miles off ; mussel dredging in South Esk.	49,107	18,240	769	Herrings, haddocks, codlings, flat-fish, and mussels.	2	Decided improvement in quantity and value of herrings landed. There was also an increase in the quantity of haddocks caught both by line boats and trawlers. The output of mussels was considerably less than last year's.
Lines and creels.	Along the coast.	380	190	64	Codlings, haddocks, and crabs.	.	Increase in haddocks, but decrease in codlings and crabs.
Nets, lines, and creels.	1 to 50 miles off.	5,414	2,095	248	,,	2	Marked improvement in haddock fishing. Few herrings landed and none cured during the year.
,,	,,	15,384	7,525	731	Herrings, codlings, haddocks, whitings and crabs.	6	Important line-fishing station ; results rather better than those of last year. Herring fishing on the decline. Large increase in the number of crabs captured.
		181,209	78,886	4,223		14	

Montrose, and Aberdeen, all of which were engaged in trawling.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	* Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Stonehaven District.																	
Shieldhill (Kincardineshire),	.	.	.	.	1	2	4	5	5	7	.	.	1	2	.	6	.
Catterline ,,	.	.	2	13	4	9	8	15	14	37	.	.	3	29	.	26	.
Crawton ,,	.	.	.	.	.	.	5	9	5	9	.	.	.	2	.	9	.
Stonehaven ,,	16	469	24	269	13	37	9	12	62	787	.	.	7	90	.	190	.
Cowie ,,	1	20	.	.	1	3	1	1	3	24	.	.	3	25	.	15	.
Skateraw ,	2	48	.	.	4	14	2	2	8	64	1	15	.	.	.	10	.
Totals, .	19	537	26	282	23	65	29	44	97	928	1	15	14	148	.	256	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines and crab creels.	1 to 4 miles off.	100	53	208	Crabs and codlings	.	For the last ten or twelve years the fishing industry at these villages has been declining. This year's catch of haddocks, whitings and crabs shows a slight improvement on that of 1905, but there is apparently little hope of any permanent improvement. The haddock fishery which once flourished here now gives but meagre returns, these fish having become very scarce on the inshore grounds. The fishermen's energies are now, therefore, almost entirely turned to crab fishing, and the grounds 1 to 3 miles off afford, from April to September, a fairly good supply of crabs, which are sent daily by the fishermen themselves direct to the English markets.
,,	,,	2,446	971	924	,,	.	
,,	,,	206	82	177	,,	.	
Drift nets and lines.	1 to 70 miles off.	38,057	13,163	11	Herrings, cod, haddocks, and whitings.	4	The fisheries at Stonehaven have also decreased during the last decade. The herring fishing is still carried on by about 20 sail boats, and in common with the whole East Coast, the catch and earnings in this particular were better this year than for many preceding. The earnings from herrings and line fish were just about equal — respectively about £6000. A new breakwater, enclosing a considerable area of safe harbourage, has now almost been completed, and this gives hope that the facilities it provides will encourage the fishermen, as at other centres, to acquire steam drifters.
,,	,,	82	39	.	Codlings and haddocks.	.	
Crab creels and lines.	,,	672	215	21	Haddocks and whitings.	.	
		41,563	14,523	1,341		4	

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Aberdeen District.																	
Downies (Kincardine-shire),	.	.	.	.	7	31	1	1	8	32	.	.	1	2	.	28	.
Portlethen ,,	4	126	7	63	4	9	6	14	21	212	.	.	.	.	.	44	.
Cove ,,	.	.	.	.	10	22	2	2	12	24	.	.	3	18	.	55	.
Aberdeen (Aberdeen-shire), . . .	†73	2,102	21	290	38	143	17	23	149	2,558	.	.	11	185	.	737	.
† Totals, .	77	2,228	28	353	59	205	26	40	190	2,826	.	.	17	269	.	864	.
Peterhead District.																	
Newburgh (Aberdeen-shire),	.	.	.	.	1	5	1	2	2	7	.	.	.	.	.	4	.
Collieston ,,	1	28	.	.	4	17	2	3	7	48	.	.	.	.	1	11	.
Oldcastle ,,	.	.	.	.	1	3	2	4	3	7	.	.	.	2	.	4	.
Whinnyfold ,,	5	210	1	18	5	14	1	3	12	245		28	.	.	1	25	6
Port Erroll ,,	8	258	4	53	4	10	4	10	20	331	.	.	2	54	2	76	9
Bullers of Buchan ,,	.	.	.	.	.	.	2	5	2	5	.	.	.	1	.	2	.
Boddam ,,	12	439	18	351	9	23	4	9	43	822	.	.	3	71	5	131	16

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* Persons from inland centres temporarily engaged in fishing.

† *Note.*—In addition to the above there were 208 steamers, carrying 2,040 men, fishing from Aberdeen, all of 18 in number, being resident, are included in the

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks
		Cwts.	£	£			
Small lines and crab and lobster creels.	2 to 5 miles off shore.	2,845	1,250	24	Haddocks and whitings.	.	The industry is still at a low ebb in these villages, and the result of the year's work presented practically no change from that of the year before.
,,	,,	3,411	1,499	50	,,	.	
Small-lines.	,,	1,194	618	78	,,	.	
Trawls, lines, and drift nets.		1,910,375	957,998	15	Haddocks, cod, herrings, plaice, halibut, soles, whitings, ling, &c.	Herring Curing . . . 34 Haddock, &c. ,, . . 126 Tinning . . . 9	A great fleet of steam trawlers, steam liners, and drifters—valued at £940,000 approximately—fish from this port. All the fishings were prosecuted with much vigour, and were again highly successful.
		1,917,825	961,365	167		169	
Lines.	From 1 to 4 miles off.	28	14	120	Haddocks and codlings.	.	Good supply of excellent mussels for bait at this creek, but very little done at fishing.
,,	From 1 to 8 miles off.	1,137	469	.	,,	.	Slight increase in quantity and value of fish landed.
,,	From 1 to 4 miles off.	540	203	.	,,		Better results obtained than in the preceding year.
Nets and lines.	From 1 to 10 miles off.	428	199		,,	.	Practically the same quantity of line fish landed as in the preceding year. Herrings all landed at Peterhead.
..	.	1,128	559	7	,,	1	The majority of the fishermen engaged in the various herring fishings from Peterhead and elsewhere. Slight improvement in the fishing.
Lines.	From 1 to 3 miles off.	38	14	.	..	.	Fishing practically discontinued at this creek.
Nets and lines	From 1 to 10 miles off.	1,975	894	129	,,	1	Considerable improvement in line fishing. Herrings landed at Peterhead.

which were engaged in trawling, and two English steam liners regularly fishing from Aberdeen, whose crews, number of "Resident Fishermen and Boys."

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek. 1st Class. 45 feet keel and upwards.		1st Class. 30 to 45 feet keel.		2nd Class. 18 to 30 feet keel.		3rd Class. Under 18 feet keel.		Total.		Increase on 1905.		Decrease from 1905.		Seaworthy Boats Unlaunched	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Peterhead District —continued.																	
Peterhead (Aberdeenshire)	112	3,283	12	144	29	124	17	32	170	3,583	.	.	16	394	6	†553	172
Buchanhaven ,,	18	571	6	82	13	51	5	13	42	717	6	67	.	.	1	116	21
Rattray ,,	.	.	.	.	.	.	4	6	4	6	1	1	.	.	.	7	.
Totals,	156	4,789	41	648	66	247	42	87	305	5.771	7	96	21	522	16	†929	†224
Fraserburgh District.																	
St. Combs (Aberdeenshire),	46	1,712	2	39	.	.	58	99	106	1,850	4	73	.	.	1	208	9
Charlestown ,,	2	77	.	.	.	.	7	14	9	91	1	39	.	.	.	23	.
Inverallochy ,,	30	1,064	.	.	.	.	62	111	92	1,175	4	84	.	.	1	227	14
Cairnbulg ,,	40	1,448	.	.	.	.	61	93	101	1,541	10	183	.	.	1	222	14
Fraserburgh ,,	101	3,596	9	100	14	93	46	82	170	3,871	.	.	8	152	.	501	20
Sandhaven & Pittulie (Aberdeenshire)	13	442	5	91	5	25	9	16	32	574	.	.	2	40	2	96	6
Rosehearty ,,	39	1,430	2	36	6	27	11	22	58	1,515	.	.	2	7	.	200	9
Pennan (Banffshire)	4	111	2	28	2	7	20	27	28	173	.	.	4	20	1	56	3
†Totals,	275	9.880	20	294	27	152	274	464	596	10790	19	379	16	219	6	1,533	75

* Persons from inland centres temporarily engaged in fishing.

† *Note.*—In addition to the above there were 9 steamers fishing from Aberdeen, all of which were engaged in three steam liners " other than

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets and lines	1 to 4 for lines and 35 to 55 for nets	684,374	223,977	104	Herrings, codlings, and haddocks.	65	A small number of the fishermen engaged in line fishing. Haddock fishing a partial failure. Fair results obtained inshore at codling fishing. Large increase in quantity and value of herrings landed. Fishermen engaged in the various herring fishings, and the results for the year were exceptionally good.
,,	,,	187	101	1	Codlings and haddocks.	.	The foregoing remarks apply to this creek.
Lines.	From 1 to 4 miles off.	248	75	19	Codlings.	.	No harbour at this creek, and fishermen frequently employed in other occupations.
		690,093	226,505	380		67	
Lines, crab and lobster creels.	1 to 10 miles off shore.	2,501	920	487	Codlings, haddocks, crabs, and lobsters.	. .	The southern part of the district shows an increase of boats and fishing gear, and the fishermen have had a prosperous year, more especially at the various herring fishings.
		2,968	1,000	117		. .	
Nets, lines, and crab creels.	Nets, 3 to 90 miles off; great lines, 12 to 90 miles; small lines, 2 to 20 miles.	702,522	219,963	177	Herrings, cod, haddocks, saithe, and crabs.	74	A decrease in the number of boats at this station; otherwise fishermen have had a successful year, principally owing to the high prices paid for herrings.
,,	,,	9,459	3,261	71	,,	3	A slow but steady decrease of boats and gear continues at this station.
Lines, crab and lobster creels.	1 to 20 miles off.	2,125	1,007	116	Haddocks and codlings.	.	Fishermen from this station who took part in the various herring fishings, especially at Shetland and England, had a good year's earnings.
,,	,,	475	183	61	,,	.	The decrease of boats and fishing gear continues at this station.
		720,050	226,334	1,029		77	

trawling. The number of fishermen includes 5 "resident" and 18 "non-resident" engaged in manning Scottish" (*see* Appendix A, No I.).

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Banff District.																	
Crovie (Banffshire),	12	373	.	.	10	32	25	35	47	440	.	.	2	26	.	122	4
Gardenstown ,,	40	1,404	7	107	17	77	18	25	82	1,613	.	.	3	40	.	220	6
Macduff ,,	52	1,904	2	32	21	79	21	43	96	2,058	.	.	.	3	4	318	8
Banff ,,	39	1,389	1	18	2	7	3	6	45	1,420	4	145	.	.	1	198	4
Whitehills ,,	13	428	10	179	30	108	24	47	77	762	.	.	3	3	2	230	4
Portsoy ,,	17	652	3	55	11	50	8	14	39	771	.	.	3	36	.	121	6
Sandend ,,	10	289	1	16	12	44	12	25	35	374	.	.	4	41	.	81	2
Totals,	183	6,439	24	407	103	397	111	195	421	7,438	4	145	15	149	7	1,290	34

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines.	1 to 10 miles off.	6,002	2,740	33	Cod and haddocks.	.	Line fishing is chiefly carried on at these creeks, and the landings show a slight improvement over that of the previous year. The herring boats go to Shetland and Fraserburgh, those fishing at the latter place occasionally landing a shot at Gardenstown.
Nets and lines.	1 to 18 miles off.				,,	5	
Nets and lines, and crab and lobster creels.	Nets, 4 to 40 miles off; lines, 2 to 20 miles off.	33,848	11,913	42	Herrings, cod, and haddocks.	8	There is a fair increase in the quantity and value of the landings at this station. In herring fishing the quantity is similar to that of last year, but the value is greater, while line fishing shows an improvement in quantity and value, chiefly in haddocks.
Lines.	2 to 14 miles off.	467	254	.	Cod and haddocks.	.	Very little fishing of any kind carried on here. Fishermen prosecute fishing from the large fishing centres. Boatbuilding is carried on by two firms, who are now fairly busy building steam drifters.
Nets and lines, and crab and lobster creels.	Nets, 3 to 30 miles off; lines, 2 to 18 miles off.	13,006	5,027	325	Herrings, cod, and haddocks.	2	Line fishing was better, the principal increase being in haddocks. Herring fishing slightly under that of the previous year, but the value greater. The total quantity and value exceed those of last year.
Nets and lines.	,,	3,639	1,234	.	,,	3	Principally a herring fishing station, but owing to the scarcity of herrings in the Moray Firth, the fishing was under that of last year. Line fishing was not vigorously prosecuted.
Lines.	1 to 8 miles off.	1,455	844	.	Cod and haddocks.	1	Line fishing alone prosecuted, the results being similar to those of last year. The herring boats fish from other places.
		58,417	22,012	405		19	

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.																Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.						
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.												
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.			No.	No.	No.
Buckie District.																			
Cullen (Banffshire), .	56	2,216	.	.	11	44	5	10	72	2,270	.	114	3	.			.	274	.
Portknockie ,,	89	3,353	.	.	11	44	7	14	107	3,411	1	233	.	.			.	397	.
Findochty ,,	82	3,241	1	22	27	108	9	18	119	3,389	6	373	.	.			1	380	.
Portessie ,,	60	2,080	2	36	10	40	1	2	73	2,158	.	.	4	164			2	323	.
Buckie	188	6,423	5	77	26	104	6	12	225	6,616	.	.	3	636			5	†992	†6
Portgordon (Banffshire)	60	1,899	.	.	20	80	4	8	84	1,987	6	.	.	146			.	316	.
Totals, .	535	19212	8	135	105	420	32	64	680	19831	13	720	10	946			8	†2,682	†6
Findhorn District.																			
Lossiemouth (Morayshire).	99	3,020	5	78	19	130	6	17	129	3,245	.	.	11	271			.	539	3

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* Persons from inland centres temporarily engaged in fishing.

† Includes 21 "resident" and 6 "non-resident" fishermen engaged in manning three steam liners "Other than Scottish" (*see* Appendix A, No. I.).

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets and lines.	Moray Firth.	2,069	925	6	Herrings, cod, and haddocks.	1	There were not so many herrings landed as last year, and little was done at curing. Haddock fishing shows a marked improvement, and so does the codling ripper fishing.
,,	,,	1,648	777	.	,,	1	Very few herrings landed. Haddock fishing slightly improved, but codling ripper fishing not so good.
,,	,,	4,992	2,310	33	,,	2	Herring fishing not so good as in 1905. Haddock fishing also poorer, fewer boats being employed than usual. The codling ripper fishing was slightly better.
,,	,,	.	.	.	.	.	No fish landed at this creek. Fishermen prosecute the fishing all the year round at other stations, and they had a prosperous season.
	,,	49,373	17,023	6	Herrings, cod, codlings, and haddocks.	10	The herring fishing was considerably better than last year's, particularly in June. Haddock fishing also shows a slight improvement. The summer and autumn fishing was the best experienced for some years past. The cod fishing yielded similar results, but the codling fishing was a little better.
	,,	1,207	649	.	Haddocks.	.	The ripper codling fishing was better than in 1905, but the haddock fishing was not so good, fewer boats being employed than usual. Fishermen belonging to this creek mostly land their fish at other stations, and had a good season at herring fishing.
		59,289	21,684	45		14	
Drift nets, lines, and creels.	Moray Firth.	31,943	10,672	66	Herrings, haddocks, cod, and flounders.	6	There was an increase in the quantity of herrings, cod, and haddocks landed at this station.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Findhorn District—continued.																	
Hopeman (Morayshire)	53	1,820	3	48	12	80	.	.	68	1,948	.	.	7	112	.	297	2
Burghead ,,	40	1,192	1	5	14	55	3	7	58	1,259	.	.	5	60	.	226	2
Findhorn ,,	.	.	.	.	2	8	1	2	3	10	.	.	.	.	.	12	.
Nairn (Nairnshire)	50	1,828	6	63	21	106	11	23	88	2,020	2	34	.	.	.	292	2
Campbelton (Inverness-shire)	1	20	.	.	7	42	3	8	11	70	.	1	1	.	.	56	

* Persons from inland centres temporarily engaged in fishing

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Drift and set nets, lines, and creels.	Moray Firth.	2,479	962	3	Herrings, haddocks, and whitings.	2	There are now three of the modern steam drifters owned at this creek. Crews, as usual, prosecuted the fishing all round the coast. At this station there was not much fishing done, yet more herrings and white fish were landed than in 1905.
Drift nets and lines.	,,	4,128	1,799	.	Herrings, cod, haddocks, whitings, and flounders.	1	One steam drifter has been owned at this station for several years, and has been remarkably successful. Other three are being acquired by local crews. In general the crews of this port were very fortunate at the stations where they prosecuted the herring fishing. The quantity of haddocks landed was greater, and of herrings and cod less.
Lines.	,,	819	579	220	Cod, haddocks, and flounders.	.	On the decline as a fishing station. The deliveries of haddocks and mussels were silghtly greater than in 1905.
Drift nets, set nets and lines.	,,	3,222	2,454	.	,,		At the different herring fishing centres the fishermen of this port were in general very successful. As herring fishers they are advancing with the time. Three steam fishing craft are now owned at the port, and more are being built to the order of local crews. During the year under review an increased quantity of cod, haddocks, and flounders were landed.
Drift nets and lines.	Upper reaches of Moray Firth.	1,349	890	.	,,	.	Of late years the herring fishing craft that were owned by the crews of this place have got worn out, and have not been replaced A good number of the men served as hired hands on board of boats belonging to other places. Less time was therefore bestowed upon line fishing.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
Findhorn District—continued	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No	Ton	No.	No.	No.
Inverness (Inverness-shire),	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Totals, .	243	7,880	15	194	75	421	24	57	357	8,552	2	35	24	443	.	1,422	9
Cromarty District.																	
Avoch (Ross-shire),	27	868	2	19	41	263	10	25	80	1,175	.	.	1	.	4	329	.
Cromarty and Invergordon ,,	3	80	.	.	9	27	29	56	41	163	.	.	.	7	1	152	.
Nigg ,,	.	.	.	.	.	.	5	8	5	8	.	.	.	2	.	14	.
Shandwick ,,	.	.	.	.	.	.	3	6	3	6	.	.	1	15	.	25	.
Balintore ,,	2	36	.	.	2	4	7	13	11	53	.	.	2	46	.	41	.
Hilton ,,	1	15	2	33	.	.	24	50	27	98	1	4	.	.	1	73	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Drift nets.	Inverness and Beauly Firths.	15,795	4,321	.	Small herrings and sprats.	3	A number of curing firms were located at Inverness during the latter quarter of the year. They paid high prices for both herrings and sprats, which induced the fishermen to pursue the fishing, even when only moderate catches were being secured. While there was an increased quantity of herrings caught, there was a deficiency in the quantity of sprats, when compared with the landings of the preceding year.
		59,735	21,677	289		12	
Drift nets and small lines.	Inverness and Beauly Firths, and 2 to 10 miles N. from Avoch.	626	317	300	Small herrings and haddocks.	.	The majority of the first-class Avoch boats were employed at herring fishing from May to November at different parts of the Scottish, English, and Irish coasts. The crews earned at these places about £18,000. The sprats landed at Inverness and credited to Findhorn district were mostly caught by Avoch crews.
Drift and seine nets and small and hand lines.	Cromarty and Dingwall Firths, and 1 to 12 miles E. & S.E. from Sutors.	7,290	4,581	675	Cod, codlings, haddocks, plaice, and flounders.	1	Small-line fishing is the chief pursuit. Better results were obtained during the last six months of the year than at any period within recent years. A number of men were engaged as hired hands on Moray Firth boats from May to November.
Small lines.	Off Sutors,	.	.	.	,,	.	The few resident fishermen land their fish at Cromarty and Invergordon.
Drift nets, and small and hand lines.	2 to 12 miles E. by S.	4,310	1,805	75	Codlings, haddocks, and plaice.	1	About a third of the fishermen resident at these three places were employed for five months at herring fishing as hired men, on board Nairn, Lossiemouth, and Banff district boats. When at home they found remunerative employment at small-line fishing
,,	,,				,,	.	
,,	,,				,,	.	

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Cromarty District—continued.																	
Rockfield (Ross-shire)	2	45	1	15	.	.	8	19	11	79	.	.	1	13	.	31	.
Portmahomack ,,	.	.	1	15	4	13	4	9	9	37	.	1	.	.	1	35	.
Inver ,,	.	.	1	23	4	22	.	.	5	45	.	.	5	132	.	26	.
Tain and Tarlogie ,,	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Totals,	35	1,044	7	105	60	329	90	186	192	1,664	1	5	10	215	7	726	.
Heimsdale District.																	
Embo (Sutherlandshire)	6	138	10	180	14	56	.	.	30	374	.	.	5	89	8	128	.
Golspie ,,	5	115	2	36	8	40	3	5	18	196	.	.	2	14	2	56	.
Brora ,,	3	85	5	85	6	30	2	4	16	204	.	.	2	27	2	54	.
Portgower ,,	1	18	.	.	1	5	1	2	3	25	.	.	1	2	.	11	.

* Persons from inland centres temporarily engaged in fishing

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Drift nets, lines, and crab creels.	From 1 to 15 miles off Tarbet Ness, and in Dornoch Firth.	2,798	1,176	112	Cod, codlings, haddocks, and plaice.	1	Three Rockfield crews fished for herrings at Ireland, Shetland and Fraserburgh, and earned in all about £2100. The local herring fishing was a complete failure. Small-line fishing was actively followed for a short period at both places.
Drift nets and small lines, and crab creels.	,,				,,	.	
Drift nets and small lines.	From 1 to 10 miles E.N.E.	54	30	.	Haddocks.	.	The majority of the Inver men were employed in fishing for herrings at other parts of the coast, during the greater part of the year, in their own boats, or in those of other fishermen.
,,	,,	.	.	58	Mussels.	.	Whole of value referable to mussels.
		15,078	7,909	1,220		3	
Lines.	2 to 5 miles off.	2,539	1,351	10	Haddocks and plaice.	.	Considerable increase in quantity and value of fish landed. The majority of the fishermen prosecute he various herring fishings from May to December—many of them as hired hands in boats belonging to other districts.
,,	,,	1,940	941	45	,,	1	Decrease in quantity and value of cod and haddocks, but increase in quantity and value of plaice. Fishermen prosecute the Scottish herring fishing, and this year two crews took part in the herring fishing at Yarmouth.
,,	,,	2,022	883	.	Cod and haddocks.	2	Becoming yearly more popular as a summer resort, and declining as a fishing-place. A considerable number of the fishermen find employment ashore as labourers during the greater part of the year.
,,	,,	405	204		,,	.	A small crofting village. Fishing industry declining.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total!		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Helmsdale District—continued.																	
Helmsdale (Sutherlandshire)	11	254	8	128	12	60	16	32	47	474	3	.	.	12	6	141	.
Berriedale (Caithness)	.	.	.	.	.	.	.	.	.	.	.	.	2	4	.	.	.
Dunbeath ,,	2	45	10	160	4	16	12	24	28	245	.	.	1	7	5	46	.
Totals. -	28	655	35	589	45	207	34	67	142	1,518	3	.	13	155	23	436	.
Lybster District.																	
Latheronwheel (Caithness-shire),	1	25	4	73	2	12	6	18	13	128	.	.	.	.	1	42	4
Forse ,,	1	25	5	90	1	9	4	10	11	134	.	.	.	.	.	46	3
Lybster ,,	12	280	25	529	4	24	4	10	45	843	.		4	73	6	173	10
Clyth (Caithness-shire)	2	68	2	36	.		5	16	9	120	.	.	.	.	.	45	3
Totals. .	16	398	36	728	7	45	19	54	78	1,225	.	.	4	73	7	306	20

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets, lines, and crab creels.	2 to 20 miles off.	5,866	2,157	221	Herrings, cod, and haddocks.	6	A decrease in line fish, due to more attention having been given to herring fishing. From May to December the majority of the fishermen were employed as hired hands aboard locally-owned steam drifters and steam and sailing drifters belonging to other districts, with, in nearly all cases, very satisfactory results.
.	.	.	.	.	.	.	No fishing now from this creek. Never important.
Nets and lines.	2 to 20 miles off.	1,738	609	18	Herrings, cod, and haddocks.	1	The majority of the fishermen are crofters. They are yearly giving more attention to the land and less to the fishing. In the quantity and value of fish landed the returns show a decrease.
		14,510	6,145	294		10	
Lines and creels.	1 to 3 miles off.	939	259	69	Codlings and haddocks.	.	A slight increase both in quantity and value of fish landed. In other respects the creek remains stationary.
"	"	.	.	.	.	.	Fish are landed at Lybster, there being no landing-place at this creek. Fishermen pay more attention to crofting.
Nets and lines.	1 to 10 miles off.	6,946	2,164	.	Herrings, cod, and haddocks.	5	A slight increase in quantity, and more so in value, compared with 1905. With regard to means of capture Lybster is on the decline.
Lines and creels.	1 to 3 miles off.	738	147	10	Codlings.	.	A small fishing creek; quantity and value show a slight increase: most of the fishermen take part in the herring fishing at Wick and Lybster.
		8,623	2,570	79		5	

APPENDIX A.--

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Wick District.																	
Whaligoe and Sarclet (Caithness-shire),	10	240	3	53	1	5	12	24	26	322	1	41	.	.	.	86	18
Wick ,,	114	3,163	11	215	1	12	29	87	155	3,477	.	140	1	.	9	694	289†
Boathaven to Staxigoe (Caithness-shire),	5	118	1	18	5	40	16	36	27	212	.	.	2	2	.	41	10
Ackergill ,,	1	30	.	.	2	8	6	12	9	50	.	.	1	4	.	19	.
Keiss and Nybster ,,	9	238	1	18	4	17	29	58	43	331	.	.	1	2	.	126	18
Auckingill and Freswick ,,	.	.	.	.	.	.	20	50	20	50	2	5	.	.	.	84	.
Duncansbay and Huna ,,	2	58	.	.	.	.	23	46	25	104	.	.	1	2	.	106	.
Gills and Mey ,,	2	48	.	.	.	.	16	48	18	96	2	6	.	.	.	60	4
Stroma ,,	6	153	.	.	4	20	46	132	56	305	.	.	2	2	.	112	12
Scarfskerry and Ham ,,	.	.	.	.	.	.	8	24	8	24	.	.	.	.	.	26	.
Brough and Dunnet ,,	.	.	.	.	.	.	8	24	8	24	.	.	2	6	.	24	.
Castlehill and Murkle ,	.	.	.	.	.	.	12	30	12	30	.	.	2	5	.	26	.
Thurso and Scrabster ,,	4	86	7	123	4	16	15	37	30	262	.	.	2	5	.	72	26

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* Persons from inland centres temporarily engaged in fishing.

† Includes 135 fishermen who manned 15 steam liners "Other than Scottish" (see Appendix A No. I.).

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines and lobster creels.	1 to 7 miles from land.	440	111	80	Cod and crabs.	.	A slight decrease in quantity and value. A number of the fishermen engage in herring fishing at the chief centres.
Drift nets, great lines, and hand lines.	2 to 6 and from 20 to 50 miles E. S. E. and E.N.E.	372,732	106,251	.	Herrings, cod, saithe, skate, and haddocks.	69	A decrease in quantity and value, chiefly in herrings. Little or no change in the means of capture. No new steam drifters or large boats built throughout the year.
Great and small lines and lobster creels.	2 to 8 miles E. and S.E.	1,486	734	60	Cod, haddocks, and crabs.	.	A slight decrease in quantity and value. Creeks yearly on the decline.
,,	Sinclair's Bay and 2 to 4 miles E. and S.E.	1,151	452	117	,,	.	No change in quantity and value. Fishermen go very little from home during the year.
,,	,,	2,309	862	1,722	Cod, lobsters, and crabs.	.	A marked decrease in quantity and value. It is only the fishermen of Keiss who depend solely upon the fishing for a livelihood.
,,	2 to 4 miles off.						
Hand lines and lobster creels.	2 to 6 miles N. and N.E.	921	452	137	Cod and lobsters.	.	A considerable decrease both in quantity and value. All the fishermen are interested in crofts.
,,	,,						
	2 to 7 miles S.E. and W.	2,143	620	363	,,	.	An increase in the value of lobsters, but a decrease in the quantity and value of other fish This island is very much exposed.
,,	2 to 6 miles N. and N.E	848	228	480	Cod, lobsters, and crabs.	.	A marked decrease in quantity and value. None of the fishermen of these creeks depend solely upon the fishing for a livelihood.
,,	,,						
Lines and lobster creels.	2 to 5 miles N. and N.W.	419	157	11	,,	.	A slight increase in quantity and value. Fishermen engage in other employment than fishing.
Drift nets, lines, and lobster creels.	2 to 6 and from 20 to 80 miles N. and N.W	9,293	3,897	418	Herrings, cod, lings, skate, and haddocks.	32	The total quantity and value of all kinds of fish are reduced to one-fourth of the previous year's, owing to the complete failure of the herring fishing.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Wick District—continued.																	
Crosskirk and Brims (Caithness-shire)	.	.	.	.	.	.	9	18	9	18	4	5	.	.	.	12	.
Sandside ,,	.	.	.	.	2	8	3	6	5	14	1	1	.	.	.	9	.
Portskerra (Sutherlandshire)	1	18	.	.	4	20	12	30	17	68	.	.	2	5	.	58	.
Strathypoint and Armadale ,,	.	.	.	.	1	4	10	20	11	24	.	.	1	4	.	54	.
Kirtomy and Farr ,,	.	.	.	.	.	.	7	14	7	14	.	.	.	28	.	56	.
Island Roan ,,	2	75	.	.	1	4	6	15	9	94	1	.	.	.	.	28	4
Skerray ,,	.	.	.	.	.	.	7	21	7	21	.	.	1	3	.	76	.
Coldibacky and Scullomy ,,	.	.	.	.	.	.	2	6	2	6	.	.	1	3	.	24	.
Talmine and Portvasgo ,,	1	25	3	44	.	.	9	27	13	96	1	3	.	.	.	42	.
Eriboll and Rispond (Sutherlandshire)	.	.	.	.	.	.	15	45	15	45	.	.	1	3	.	52	.
Totals .	157	4,252	26	471	29	154	320	810	532	5,687	12	201	20	74	9	1,887	381
Orkney District.																	
North Ronaldshay .	4	100	.	.	.	.	12	12	16	112	.	.	.	.	.	52	.
Sanday . . .	.	.	.	.	.	.	24	32	24	32	1	2	.	.	.	52	.
Westray and Papa .	5	114	.	.	10	55	66	129	81	298	.	20	.	.	.	225	.
Eday and Pharay .	.	.	.	.	1	7	22	30	23	37	.	.	3	2	.	54	.
Stronsay . .	12	408	.	.	.	.	27	48	39	456	1	3	.	.	.	90	.

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* Persons from inland centres temporarily engaged in fishing.

No II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish.)		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines and creels.	2 to 5 miles N. and N.W.	270	112	502	Cod, flounders, and lobsters.	.	The results show a slight decrease. Creeks very exposed, and no proper harbour accommodation.
..	,,	655	253	330	,,	.	A slight increase in quantity and value.
..	,,	2,659	850	484	Cod, haddocks and lobsters.	.	Crofting and fishing are combined at these creeks. An increase both in quantity and value of fish landed.
..	,,						
..	,,	221	46	41	,,	.	Insignificant as fishing creeks. Fishermen depend chiefly upon crofting and engagement as hired hands at the various herring fishings
,,	,,	614	153	82	,	.	A slight increase in quantity and value. Fishermen a great deal from home at the various herring fishings.
,,	,,	826	204	43	Haddocks and lobsters.	.	Crofting receives more attention than fishing. Results much the same as in the previous year.
..	,,						
..	,	1,038	204	68	,,		
..	,,	4,571	1,130	184	Cod, haddocks, flounders, and lobsters.	.	A slight decrease in quantity and value. Fishermen handicapped by lack of railway facilities for sending fish to market.
		402,596	116,716	5,122		101	
Nets, lines and creels.	Inshore.	.	.	.	Herrings, cod, saithe, and lobsters.	.	All crofter fishermen, who engage in line and lobster fishing. The line fishing has been on the decline in recent years, but the lobster fishing has received more attention. One herring-curing station at Sanday.
..	,,	4.735	1,506	820	,,	1	
,,	,,	2,825	856	194	,,	3	
,,	,,	739	162	403	,,	1	
,,	20 to 50 miles off and inshore.	112,604	35,913	383	Herrings and lobsters.	12	Herring-curing station; the herring fishing has been successfully prosecuted for several years back. A considerable lobster fishing also carried on.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Orkney District—continued.																	
Shapinshay . .	1	49	.	.	.	.	17	21	18	70	.	.	1	21	.	36	.
Rousay, Egilshay, and Viera	.	.	.	.	.	.	12	15	12	15	.	.	4	9	.	26	.
Evie and Birsay .	1	25	.	.	.	.	24	26	25	51	6	30	.	.	.	54	.
Kirkwall . .	1	34	4	72	5	24	22	60	32	190	.	16	1	.	.	64	.
Tankerness . .	.	.	.	.	.	.	3	3	3	3	1	.	.	.	.	6	.
Deerness . .	5	125	.	.	.	.	8	9	13	134	.	.	2	43	.	51	.
Holm . . .	5	109	.	.	.	.	5	10	10	119	.	.	1	31	.	42	.
Burray . . .	20	525	.	.	3	18	10	20	33	563	.	1	.	.	.	128	.
Orphir and Scapa .	.	.	.	.	1	5	10	19	11	24	.	.	.	.	.	22	.
Stromness . .	.	.	.	.	1	4	20	34	21	38	.	.	.	2	.	53	.
Hoy and Graemsay .	1	25	.	.	.	.	14	20	15	45	.	.	3	24	.	40	.
Walls . . .	5	124	.	.	.	.	11	16	16	140	.	.	3	6	.	70	.
Flotta . . .	1	18	1	17	.	.	18	24	20	59	5	37	.	.	.	63	.
Phara and Cava .	.	.	.	.	.	.	3	6	3	6	.	.	.	.	.	6	.
Swona . . .	.	.	.	.	.	.	4	10	4	10	.	.	1	.	.	15	.
South Ronaldshay .	8	146	2	36	2	11	25	49	37	242	.	.	2	45	.	86	.
†Totals. .	69	1,802	7	125	23	124	357	593	456	2,644	14	109	21	183	.	1,235	.

*Persons from inland centres temporarily engaged in fishing.

† *Note.*—In addition to the above there were 36 steam

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines and creels.	Inshore.	9,383	3,103		Cod and lobsters.	1	Little done at fishing locally. Most of the fish landed by English trawlers and Faroe smacks.
,,	,,	.	.	188	Lobsters.	.	Crofting islands; lobster fishing principally, but a little done at hand-line fishing also.
,,	,,	276	102		Cod and lobsters.	.	The above remarks apply to these creeks.
Nets, lines, and creels	Stronsay Firth.	34,349	13,584	4,447	,,	3	Line and lobster fishing engaged in all the year round. A large portion of the fish returned, however, is landed by English trawlers and Faroe smacks.
Lines and creels.	Inshore.	.	.		,,	.	Crofting districts; line and lobster fishing engaged in throughout the year. Most of the line fish used locally; lobsters sent to Kirkwall.
,,	,,	223	56	338	,,	.	
Nets, lines, and creels.	20 to 50 miles off S.E. and inshore.	5,534	875	33	Herrings.	2	Herring-curing stations; fishing a failure this year. A little also done at line and lobster fishing.
,,	,,	2,487	616	.	,,	2	
Lines and creels.	Inshore.	770	244	51	Cod and haddocks.	1	Small and hand-line and lobster fishing carried on.
Nets, lines, and creels.	10 to 50 miles off Hoy Head, N.W. and inshore.	6,980	2,818	808	Herrings, cod and lobsters.	7	Herring-curing station. The fishing has been a failure for a number of years back, and the year under review was the worst on record. Line and lobster fishing also engaged in.
,,	Inshore and Scapa Flow	1,559	361	955	Herrings, cod, and lobsters.	.	The fishermen are all of the crofting class, and engage in line and lobster fishing all the year round. The line fish are all used fresh, or cured, dried, and sold in the district. One herring-curing station at Cara, South Ronaldshay, but the fishing has been falling away for years.
,,	,,	.	.	.	,,	.	
,,	,,	764	223	441	,,	.	
,,	,,	.	.	.	,,	.	
,,	,,	.	.	.	,,	.	
,,	,,	2,193	735	290	,,	1	
		185,431	61,154	9,349		34	

drifters occasionally landed herrings in the district.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Shetland District.																	
Fair Isle . . .	.	.	.	.	.	.	7	7	7	7	.	.	.	.	.	30	.
Grutness . . .	3	89	.	.	3	22	9	9	15	120	.	8	.	.	.	57	.
Quendale Bay . .	6	229	.	.	.	.	5	5	11	234	.	.	1	1	.	42	.
Boddam . . .	.	.	.	.	5	25	1	1	6	26	.	.	1	4	.	61	.
Spiggie . . .	3	182	1	19	.	.	2	2	6	203	.	.	.	.	.	57	.
Levenwick . . .	12	473	2	38	.	.	2	2	16	513	.		1	5	.	67	.
Hoswick . . .	16	716	.	.	.	.	6	6	22	722	.	28	1	.	.	85	.
Sandsair . . .	14	472	4	78	.	.	6	6	24	556	.	12	.	.	.	89	.
Aithsvoe . .	10	424	5	96	.	.	6	6	21	526	.	.	.	.	.	85	.
Bressay . .	1	28	.	.	.	.	13	13	14	41	.	.	.	3	.	36	.
Lerwick . . .	67	2,498	10	167	18	89	28	28	123	2,782	.	.	6	142	.	515	.
Nesting . . .	4	96	1	18	.	.	4	4	9	118	.	.	2	34	.	33	.
Whalsay . . .	29	801	8	162	.	.	17	16	54	979	.	.	.	.	.	180	.
Skerries . . .	1	20	2	35	1	9	7	7	11	71	.	.	.	.	.	30	.
Vidlin	2	45	3	54	.	.	4	4	9	103	.	.	.	.	.	36	.
Burravoe . .	4	89	1	18	.	.	2	2	7	109	.	.	.	2	.	31	.
Gossabrough . .	1	22	.	.	.	.	5	5	6	27	.	.	.	.	.	20	.
Mid Yell . . .	12	335	4	59	3	12	10	7	29	413	.	.	.	.	.	125	.
Gutcher . . .	.	.	.	.	.	.	2	2	2	2	.	.	.	.	.	5	.
Cullivoe . . .	6	215	2	36	3	15	18	18	29	284	5	20	.	.	.	65	.
Fetlar	.	.	.	.	.	.	3	3	3	3	1	.	.	5	.	14	.
West Sandwick . .	.	.	.	.	.	.	8	8	8	8		.	.	.	.	29	.

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* Persons from inland centres temporarily engaged in fishing

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal Kinds of Fish Landed.	No. of Curing Stations	General Remarks.
		Cwts.	£	£			
Lines.	Round the island.	5,452	1,427	.	Saithe, cod, ling, tusk, halibut, and herrings.	1	At these stations the principal industry is hand-line and great-line fishing. There was a great decrease in the quantity of fish landed, owing chiefly to the failure of the saithe fishing; but, owing to an improvement in the herring fishing, the total value of fish was almost equal to that for 1905.
Nets and lines.	Chiefly inshore.				,,	1	
,,	,,				..	.	
,,	2 to 40 miles off.				,,	2	
,,	Chiefly inshore.				..	.	
,,	2 to 60 miles off.	85,944	32,220	.	,,	2	There was a great decrease in the great-line fishing, and a decrease in total quantity of fish landed; but, owing to the high prices paid for herrings, an increase in value of over £11,000
..	..				,,	11	
..	..	2,008	592	.	Herrings only.	.	Great decrease, both in quantity and value
..	,,				,,	1	
,,	2 to 80 miles off.	920,649	362,346	208	Herrings, cod, ling, tusk, saithe, haddocks, and halibut.	8	At these stations there was a decrease of 75,000 cwts. in the quantity of herrings landed, but an increase in value of over £100,000. Haddock fishing was normal. Great-line fishing was a comparative failure, but the usual quantity of cod, ling, &c., was more than made up by Faroe and Iceland fish, mostly landed by Faroe vessels.
.	,,				,,	41	
Lines.	Inshore.				..	.	
Nets and lines.	2 to 50 miles off.	29,681	11,159	.	Herrings, cod, ling, tusk, saithe, and haddocks.	2	Great decrease in quantity, especially of line fish; but a slight increase in total value, owing to the higher prices paid for herrings.
,,	2 to 50 miles off.					2	
,,	Inshore.					1	
,,	1 to 40 miles off.	15,556	4,758	8		1	General decrease, especially in herrings. The total quantity landed was only a fourth, and the value about a third, of the yield of the fisheries at these stations in 1905.
Lines.	1 to 10 ,,					.	
Nets and lines.	1 to 40 ,,				,,	3	
Lines.	1 to 10 ,,				but chiefly herrings and haddocks.	.	
Nets and lines.	1 to 40 ,,					8	
Lines.	Inshore.					1	
Nets and lines.	1 to 40 miles off.					1	

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
Shetland District—continued.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Muness and Colvidale .	.	.	.	.	.	.	3	3	3	3	.	.	.	.	.	9	.
Uyasound . . .	5	130	2	36	1	3	5	5	13	174	.	.	7	91	.	84	.
Westing . . .	.	.	.	.	.	.	6	6	6	6	.	.	1	3	.	18	.
Snarravoe . . .	.	.	.	.	.	.	4	4	4	4	.	.	.	.	.	12	.
Ramnagoe . . .	.	.	.	.	.	.	2	2	2	2	.	.	.	.	.	6	.
Baltasound . . .	14	613	.	.	.	.	8	8	22	621	.	.	4	71	.	65	.
Haroldswick . .	1	20	.	.	2	8	9	9	12	37	.	.	2	20	.	42	.
Norwick . . .	.	.	1	18	.	.	9	9	10	27	.	.	.	.	.	30	.
Burrafirth . . .	.	.	.	.	.	.	7	8	7	8	.	.	.	.	.	20	.
Fethaland and Sandvoe	1	65	.	.	7	35	7	7	15	107	.	.	3	33	.	51	.
Northroe . . .	.	.	1	18	.	.	2	2	3	20	.	.	.	.	.	19	.
Ollaberry . . .	.	.	.	.	.	.	7	7	7	7	.	.	.	.	.	30	.
Dalesvoe . . .	1	20	1	16	.	.	4	4	6	40	.	.	2	25	.	28	.
Mossbank . . .	1	20	1	20	3	12	8	7	13	59	.	.	2	25	.	32	.
Ronasvoe . . .	.	.	.	.	.	.	6	6	6	6	.	.	.	.	.	22	.
Stennis	.	.	.	.	8	32	3	3	11	35	.	.	1	4	.	54	.
Hillswick and Brae .	2	40	2	36	1	6	14	12	19	94	.	.	.	18	.	76	.
Papa and Voe . .	5	90	.	.	1	4	20	21	26	115	.	.	3	48	.	90	.
Foula	.	.	.	.	6	18	13	13	19	31	.	.	2	3	.	56	.
Sandness . . .	3	75	3	47	.	.	6	6	12	128	2	3	.	.	.	40	.
Vaila Sound (Walls) .	4	97	4	66	1	4	16	14	25	181	.	.	2	9	.	89	.
Skeld	.	.	2	32	.	.	3	3	5	35	.	.	.	.	.	20	.
Raewick . . .	.	.	.	.	.	.	3	3	3	3	.	.	.	.	.	16	.
Sand	1	26	2	32	.	.	7	7	10	65	1	26	.	.	.	32	.
Whiteness . . .	8	240	2	31	.	.	10	10	20	281	.	.	.	.	.	62	.
Burwick . . .	.	.	.	.	.	.	4	4	4	4	.	.	.	.	.	14	.
Scalloway . . .	14	659	.	.	1	3	21	24	36	686	.	.	.	.	.	140	.
Burra Isles . .	28	955	5	75	.	.	33	30	66	1,060	.	.	1	10	.	167	.
Oxna Isle . . .	1	20	1	18	.	.	6	6	8	44	.	.	.	.	.	15	.
Havera . . .	1	34	.	.	.	.	2	2	3	36	.	.	.	.	.	7	.
Trondra . . .	.	.	1	16	.	.	11	8	12	24	.	.	.	.	.	47	.
Totals, .	281	9,838	71	1,241	64	297	424	414	840	11790	9	97	42	556	.	3,085	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish)		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines.	Inshore.	13,150	4,402	.	Herrings.	.	Great decrease in quantity and value. The herring fishing only yielded a third of the quantity and half the value of the catch for 1905.
Nets and lines.	2 to 50 miles off.				,,	.	
Lines.	Inshore.				,,	.	
,,	,,				,,	.	
,,	,,				,,	4	
Nets and lines.	1 to 70 miles off.	477,957	169,451	.	Herrings, saithe, and great-line fish generally.	53	Great decrease in herring fishing — over 50 per cent. in quantity, and nearly 25 per cent. in value—as compared with the results of the previous year. Line fishing was neglected, the landings of saithe especially being exceptionally small.
Lines.	Inshore.				,,	1	
,,	,,				,,	.	
Lines.	Inshore.				,,	.	
Lines.	Inshore.	6,449	1,940	5	Herrings, cod, haddocks, &c.	1	Considerable increase both in quantity and value.
Nets and lines.	1 to 40 miles off.				,,	2	
Lines.	Inshore.				,,	1	
,,	,,				,,	.	
,,	,,				,,	1	
Nets and lines.	1 to 40 miles off.	5,953	1,406	.	Herrings, cod, haddocks, &c.	4	Great decrease, especially in herrings. The total quantity was less than a sixth, and the value less than a fifth, of the returns for 1905.
,,	,,				,,	1	
,,	,,				,,	5	
,,	,,	8,235	2,302	9	Herrings and haddocks.	1	Great decrease; the quantity and value of herrings amounted to only about a third of last year's figures.
Lines.	Round the island.				,,	1	
Nets and lines.	1 to 25 miles off.				,,	2	
,,	1 to 40 miles off.				Herrings, cod, and ling.	4	
,,	1 to 50 miles off.	92,936	30,493	88	Herrings, cod, haddocks and mussels.	. . . . 30 3	The Scalloway herring fishing proved a failure, only about half the previous year's quantity being landed. Higher prices were realised for fresh herrings. There was a good haddock fishing, both in the beginning and again towards the end of the year. As at Lerwick, most of the cod were brought from Faroe and Iceland, the home fishing having proved a failure.
		1,663,970	622,496	318		200	

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	* Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Stornoway District.																	
SOUTH LOCHS SECTION.																	
Arivruaich to Lemervay (Lewis, Ross-shire)	12	420	13	234	23	138	32	64	80	856	1	.	.	59	.	429	.
Gravir ,,																	
Colbost ,,																	
Marvaig ,,																	
Cromore ,,																	
Garryvard to Keose ,,																	
NORTH LOCHS SECTION.																	
Leurbost (Lewis, Ross-shire)	10	350	12	216	18	108	31	62	71	736	9	107	.	.	.	312	.
Crossbost ,,																	
Ranish ,,																	
Grimshader ,,																	
STORNOWAY SECTION.																	
Stornoway (Lewis, Ross-shire),	.	.	.	.	4	24	15	30	19	54	4	.	.	4	.	44	.
Sandwick ,,																	
Holm ,,																	
Melbost & Stenish ,,																	
GARRABOST SECTION.																	
Swordale and Knock (Lewis, Ross-shire),	30	1,050	3	54	24	144	7	14	64	1,262	.	.	5	26	.	436	.
Bayble ,,																	
Garrabost ,,																	
PORTNAGURAN SECTION.																	
Sheshader (Lewis, Ross-shire)	16	560	2	36	30	180	4	8	52	784	.	.	.	104	.	282	.
Portvoller ,,																	
Portnaguran ,,																	
Shader ,,																	
BACK SECTION.																	
Tong (Lewis, Ross-shire)	12	420	.	.	19	114	16	32	47	566	.	.	.	41	.	530	.
Coll ,,																	
Vatisker ,,																	
Back ,,																	
Tolsta ,,																	

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets, lines, and lobster creels.	The Minch.	2,408	946	338	Saithe and haddocks.	1	Crofting district ; very little fishing done. First-class boats (30 to 45 ft. keel) are being replaced by smaller craft.
,	,,	1,758	343	143	,,	1	,,
,	Minch and off the Butt 10 to 40 miles.	204,040	65,622	60	Herrings.	67	Excellent harbour and pier accommodation for fishing boats, as well as ample curing space.
,,	The Minch.	6,539	2,071	156	Cod and ling.	3	Cod and ling fishing, which begins in June and terminates in August, is carried on by local small craft.
,,	,	9,016	3,380	135	,,	4	Cod, ling, and haddock fishings were occasionally prosecuted during the year by small craft, with fair success.
Nets, lines, and creels.	,	3,052	1 567	25	Haddocks.	.	Crofting district ; very little fishing ; haddocks chiefly. The large boats fish from other stations.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Stornoway District—continued.																	
NESS SECTION.																	
Skegersta (Lewis, Ross-shire) Port Ness ,, Borve and Shader West ,,	.	.	.	.	34	204	4	8	38	212	.	.	.	14	.	588	.
SHAWBOST SECTION.																	
Barvas and Brue (Lewis, Ross-shire) Arnol and Bragar ,, Shawbost ,,	.	.	1	18	10	60	5	10	16	88	.	.	4	30	.	355	.
CARLOWAY SECTION.																	
Carloway (Lewis, Ross-shire) Tolstachuilish ,, Breasclete ,, Callanish ,,	.	.	6	108	8	48	8	16	22	172	1	.	.	76	.	295	.
BERNERA SECTION.																	
Lundale to Earshader (Lewis, Ross-shire) Tobson and Valsey ,, Breaclete and Hacklet (Lewis, Ross-shire) Kirkibost ,,	.	.	2	36	9	54	24	48	35	138	.	.	3	44	.	159	.
VALTOS SECTION.																	
Valtos & Kneep (Lewis, Ross-shire) Uigan & Arduig ,, Croulista ,, Islivaig, Breanish, and Loch Hamnevy (Lewis, Ross-shire)	.	.	3	54	7	42	5	10	15	106	.	.	7	26	.	150	.

* Persons from inland centres temporarily engaged in fishing.

No. II —*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines.	The Minch	13,532	4,159	.	Cod, ling, and skate.	4	Crofting and fishing. The latter is falling off.
Lines and lobster creels.	Off Loch Sheabost.	310	84	36	Cod.	2	,,
Nets, lines and lobster creels.	Off Loch Roag.	11,254	3,009	247	Cod and ling.	2	,,
Lines and lobster creels.	,,	3,591	914	638	Lobsters and ling.	3	,,
,,	Loch Roag and off Loch Roag.	2,265	690	145	Cod and ling.	4	Crofting and fishing. There is an increase in the catch and value of white and shell fish landed during the year.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	* Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
Stornoway District—continued.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
NORTH HARRIS SECTION.																	
Cluer to Grogabay (Inverness-shire)	.	.	.	.	27	162	20	40	47	202	.	19	10	.	.	234	.
Scadabay ,,																	
Plockropool ,,																	
Drimnishader ,,																	
Meavig ,,																	
Derriclate ,,																	
Taransay ,,																	
Scarp Island ,																	
Ardhasaig ,,																	
Tarbert and Urgha ,,																	
Kyles of Scalpay ,,																	
Molinganish ,,																	
Renniegedle ,,																	
Mavaig and Ardvourlie ,,																	
SCALPAY SECTION.																	
Scalpay and Scotasay (Inverness-shire)	.	.	1	18	12	72	17	34	30	124	.	.	5	58	.	104	.
SOUTH HARRIS SECTION.																	
Obbe and Kintilivaig, (Inverness-shire)	.	.	.	.	31	186	18	36	49	222	.	52	8	.	.	195	.
Strond ,,																	
Finsbay ,,																	
Cudinish ,,																	
Flodabay ,,																	
Manish ,,																	
Geocrab and Licisto (Inverness-shire)																	
Totals, .	80	2,800	43	774	256	1,536	206	412	585	5,522	15	178	42	482	.	4,113	.
Barra District.																	
Boreray (Inverness-shire)	.	.	.	.	1	4	4	11	5	15	.	.	.	.	.	20	.
Berneray ,,	.	.	.	.	11	49	3	6	14	55	.	.	3	12	1	42	.

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets, lines, and lobster creels	The Minch.	2,773	784	493	Lobsters and haddocks.	1	An important whaling station (at Bunaveneader, West Loch Tarbert). 166 whales of all kinds were caught in 1906.
	,,	3,164	853	205	Herrings.	1	Two islands in East Loch Tarbert. Fair catches of herrings of good quality were landed at Scalpay in August and September by local small craft.
,,	The Minch and Sound of Harris.	2,010	623	608	Lobsters and ling.	4	The Sound of Harris is famed for lobsters of good quality. There was a fair herring fishing obtained at Finsbay in August and September. Several curing vessels from other districts filled up there.
		265,712	85,045	3,229		97	
Lines and creels.	1 to 3 miles N.W.	183	46	1,086	Lobsters and flounders.	.	Lobster fishing principally prosecuted. Results similar to those of previous year.
,,	1 to 4 miles N.E. and W.				,	.	A number of the younger fishermen belonging to Berneray find employmen on board yachts during the summer months.

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
Barra District—continued.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Hougharry to Locheport (Inverness-shire)	.	.	.	.	9	24	3	5	12	29	.	.	.	1	1	40	.
Grimsay ,,	.	.	.	.	11	35	1	2	12	37	.	.	1	2	.	42	.
Heisker ,,	.	.	.	.	5	16	.	.	5	16	.	.	2	8	.	20	.
Benbecula ,,	.	.	.	.	7	15	12	26	19	41	2	3	.	.	1	51	.
Loch Carnan ,,	.	.	1	14	9	36	29	48	39	98	1	.	.	1	.	95	.
Loch Skipport ,,	.	.	.	.	5	27	3	5	8	32	2	14	.	.	.	24	.
Loch Boisdale ,,	1	32	3	34	20	78	35	65	59	209	5	68	.	.	1	140	.
Eriskay ,,	.	.	17	236	9	26	9	19	35	281	.	.	5	45	.	145	.
Bruernish and Balnabodach ,,	.	.	12	198	5	16	7	11	24	225	4	44	.	.	1	84	.
Ault and Ersary ,,	.	.	4	43	4	27	2	3	10	73	1	8	.	.	.	42	.
Brevig and Skallary ,,	.	.	4	53	5	20	.	.	9	73	1	.	.	14	.	40	.
Castlebay ,,	.	.	18	270	6	36	6	11	30	317	.	33	.	.	2	162	.
Mingulay ,,	.	.	2	43	1	2	1	2	4	47	.	.	1	2	.	18	.
Totals, .	1	32	61	891	108	411	115	214	285	1,548	16	170	12	85	7	965	.
Loch Broom District.																	
Poulin (Sutherlandshire),	.	.	.	.	.	.	1	3	1	3	.	.	.	.	.	9	.
Oldshorebeg and Oldshoremore ,,	.	.	1	18	1	3	9	27	11	48	.	.	3	8	.	33	.
Kinlochbervie ,,	.	.	3	56	1	10	5	15	9	81	.	.	1	2	.	10	.
Badcall and Achriskall ,,	1	25	1	20	.	.	4	12	6	57	.	22	.	.	.	23	.
Ardmore ,,	.	.	.	.	.	.	3	9	3	9	.	.	.	.	.	6	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks
		Cwts.	£	£			
Nets, lines, and creels.	1 to 3 miles off the coast.	4,378	723	2,654	Lobsters and mackerel.	.	In this section also lobster fishing receives most attention, and returns show slight increase. Line fishing, which is prosecuted principally from Grimsay, shows a slight decrease.
Lines and creels.	1 to 4 miles S.E.				Lobsters, flounders, and eels.	.	
,,	Round the island 1 to 3 miles off.				Lobsters.	.	
Nets, lines, and creels.	1 to 3 miles E. and W.				Lobsters and mackerel.	.	
,,	1 to 5 miles E. and S.E.	2,440	399	322	,,	1	Mackerel were plentiful during July and August, but there was little demand for this class of fish.
,,	1 to 6 miles off the coast.	4,173	1,098	66	Herrings, mackerel & lobster.	1	Herring fishing was successfully prosecuted, particularly during the latter part of the year.
,,	1 to 10 miles off the coast	34,244	13,719	552	,,	8	Herring fishing was prosecuted from May to the close of the year and the landings for the year form a record for the creek.
,,	From Loch Boisdale to Barra, 1 to 20 miles off.	713	201	.	Herrings and ling.	1	The fishermen belonging to this island made good earnings at herring fishing, landing their catches at Loch Boisdale.
,,	1 to 20 miles E. and W. of Barra.	124,187	57,269	1,046	Ling and lobsters.	1	Herring fishing chiefly prosecuted, the catches being landed at Castlebay.
,,	,,				,,	1	
,,	,,				,,	1	
,,	1 to 20 miles E. and 10 to 60 miles N.W. of Barra.				Herrings, cod, ling, and lobsters.	29	Herring fishing was successfully prosecuted from May to October, and the results were the best obtained for several years. Nearly all the local crews had substantial earnings.
,,	1 to 10 miles E. and S.W. of Barra Head.				Lobsters.	.	Two crews prosecuted herring fishing at Castlebay with considerable success.
		170,318	73,455	5,726		43	
Nets, lines, and lobster creels.	Minch and Loch Inchard.	584	202	173	Herrings and lobsters.	. . 2 . .	Decrease in quantity and value of all kinds. Herring fishing the worst experienced for 10 or 12 years.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched	Resident Fishermen and Boys	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Loch Broom District—continued.																	
Findlemore & Fanagmore (Sutherlandshire),	.	.	1	18	.	.	5	10	6	28	.	.	1	8	.	19	.
Tarbert and Scourie ,,	1	22	2	38	.	.	16	32	19	92	.	4	2	.	.	32	.
Badcall (Scourie) ,,	.	.	.	.	.	.	6	12	6	12	.	.	2	31	.	13	.
Unapool (Glendhu) ,,	.	.	.	.	.	.	5	15	5	15	.	.	.	.	.	11	.
Ardvar and Need ,,	.	.	.	.	.	.	5	20	5	20	.	2	1	.	.	19	.
Drumbeg ,,	.	.	.	.	.	.	7	14	7	14	.	.	1	11	.	26	.
Culkein (Drumbeg) ,,	.	.	.	.	.	.	9	18	9	18	.	.	3	20	.	25	.
Clashnessie ,,	1	45	.	.	.	.	4	8	5	53	.	.	1	8	.	28	.
Achnacarion ,,	.	.	.	.	.	.	3	6	3	6	.	.	.	4	.	17	.
Culkein (Stoer) ,,	1	24	.	.	.	.	5	10	6	34	.	.	.	5	.	23	.
Raffin and Balnacladich ,,	.	.	.	.	.	.	8	16	8	16	.	.	2	15	.	31	.
Clachtoll ,,	1	25	.	.	.	.	7	21	8	46	.	.	2	6	.	33	.
Achmelvich ,,	.	.	.	.	.	.	8	13	8	13	.	.	.	11	.	27	.
Lochinver and Strathan ,,	1	25	.	.	2	16	7	12	10	53	.	.	3	45	.	17	.
Badnaban and Inverkirkaig ,,	.	.	.	.	.	.	6	10	6	10	.	.	1	10	.	21	.
Achnahaird and Reef (Ross-shire)	.	.	1	15	2	9	3	8	6	32	.	12	.	.	.	20	.
Altandhu ,,	2	53	.	.	5	21	4	9	11	83	.	19	.	.	.	51	.
Polbain and Tanera ,,	.	.	1	28	8	27	5	12	14	67	.	.	.	3	.	40	.
Achiltibuie and Badnescally ,,	.	.	4	27	2	8	9	18	15	53	.	.	.	13	.	25	.
Polglass and Culnacraig ,,	.	.	1	14	3	15	5	5	9	34	1	7	.	.	.	27	.
Isle Martin and Ardmair ,,	.	.	.	.	1	8	4	8	5	16	.	.	1	9	.	15	.
Rhue and Morefield ,,	.	.	.	.	.	.	7	14	7	14	.	.	5	25	.	21	.
Ullapool ,,	.	.	1	18	5	45	15	30	21	93	.	.	16	63	.	35	.
Rheroy, Ardendrean, and Letters ,,	.	.	3	46	8	60	15	30	26	136	.	.	14	25	.	61	.
Achmore and Scorraig ,,	.	.	1	8	1	6	7	14	9	28	.	2	.	.	.	35	.
Charnock and Badrallock ,,	.	.	.	.	.	.	5	10	5	10	.	.	.	3	.	12	.
Ardessie and Badcall ,,	.	.	.	.	.	.	3	6	3	6	.	.	.	.	.	20	.
Durnamuck and Badlurach ,,	.	.	.	.	1	5	8	16	9	21	.	.	2	11	.	22	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets, lines, and lobster creels.	Minch and Loch Laxford.	99	31	463	Lobsters .		Decrease in quantity and value compared with returns of last year and previous years.
,,	Lochs Glen Dhu and Glen Coul.	1,428	451	704	Cod, ling, and lobsters,		,,
,,	Minch and Loch Cairnbaan.	253	82	606	Lobsters		Decrease in herrings. Lobsters and other shellfish show an increase of £113 compared with 1905 returns.
,,	Minch.	3,356	957	613	Herrings, cod, ling, and lobsters.		Heavy decrease in all kinds — herrings and lobsters principally.
,,	Minch and Loch Broom.	1,516	476	1114	Herrings, cod, and lobsters.		Decrease in herrings and white fish. Value of lobsters increased by about £600.
Nets and small lines.	Loch Broom.	4,373	1,765	116	Herrings, cod, and haddocks.		Very heavy decrease in quantity and value, owing to complete failure of herring fishing. Decrease, 127,066 cwts., £27,948.
Nets, lines, and lobster creels.	Little Loch Broom.	121	35	17	,,		Decrease in both quantity and value of all kinds of fish.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Loch Broom District—continued.																	
First and Second Coast (Ross-shire)	.	.	.	.	.	.	4	9	4	9	.	.	1	4	.	14	.
Sand and Laid ,,	.	.	.	.	.	.	7	14	7	14	.	.	3	23	.	27	.
Achgarve, Udrigle, and Mellon ,,	.	.	.	.	.	.	7	12	7	12	.	.	1	7	.	25	.
Opinion and Mellon Charles ,,	.	.	.	.	.	.	9	17	9	17	.	.	2	15	.	49	.
Ormiscraig and Bualnaluib ,,	.	.	1	8	1	5	4	9	6	22	.	.	1	6	.	21	.
Teneflin and Aultbea ,,	.	.	.	.	1	7	3	7	4	14	.	.	.	.	.	13	.
Poolewe and Nast ,,	.	.	.	.	.	.	3	7	3	7	.	.	2	5	.	19	.
Inverasdale ,,	.	.	2	30	1	4	5	12	8	46	.	9	.	.	.	29	.
Cove ,,	.	.	.	.	.	.	7	14	7	14	.	.	3	9	.	31	.
Melvaig ,,	.	.	.	.	2	14	4	8	6	22	.	.	2	7	.	28	.
North Erradale ,,	.	.	.	.	.	.	2	6	2	6	.	.	1	2	.	13	.
Sand (Gairloch) ,,	.	.	.	.	4	18	3	6	7	24	.	.	1	4	.	30	.
Strath ,, ,,	.	.	.	.	4	18	4	10	8	28	.	.	1	2	.	35	.
Charleston ,,	.	.	1	17	1	7	2	6	4	30	.	.	.	.	.	10	
Badachro ,,	1	22	3	54	6	37	5	10	15	123	.	.	3	14	.	35	.
Port Henderson ,	.	.	.	.	4	30	3	6	7	36	.	.	1	4	.	27	.
South Erradale ,,	.	.	.	.	.	.	2	4	2	4	.	.	.	1	.	10	.
Red Point ,,	.	.	.	.	1	7	3	6	4	13	.	.	.	3	.	12	.
Totals .	9	241	27	415	65	380	290	626	391	1662	1	77	83	442	.	1,235	.
Lochcarron and Skye District.																	
Loch Torridon (Ross-shire),	.	.	.	.	10	54	22	40	32	94	2	.	.	24	6	74	.
Applecross ,,	.	.	.	.	12	65	7	16	19	81	.	.	1	9	6	57	.

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets and lobster creels.	Loch Ewe and Loch Broom	2,913	958	219	Herrings, cod, and haddocks.	. .	Increase in both quantity and value compared with returns for 1905, due principally to successful herring fishing in Loch Ewe last week of December.
Nets, lines, and creels.	Minch.	2,775	683	108	Herrings, cod, haddocks, and shell-fish.	. .	Increase of 2,298 cwts. in quantity, and £567 in value, compared with 1905 returns, mostly referable to herrings. Shell-fish decreased.
Lines and creels.	,,	1023	281	56	Herrings, haddocks, and shell-fish.	.	Increase in both quantity and value.
Nets, lines and creels.	,,	10,067	3,462	122	Herrings, cod, ling, saithe, haddocks and shell-fish.	9 . . .	Quantity landed 2,000 cwts. less than 1905, but value over £400 higher. The increased value is due to the running of a regular steamer by the Congested Districts Board. Instead of three curers as formerly, nine operated at Badachro, while auction sales were commenced for the first time, and were conducted successfully. All connected with the trade appreciate the steamer service, especially the local fishermen, who have done very well with the increased competition.
		28,508	9,383	4,311		11	
Nets, lines, and creels.	Loch Torridon and the waters between Skye and the mainland.	672	172	324	Herrings and lobsters.	.	Returns exhibit an improvement over those of the previous year, and are about the average.
,,	Between Raasay and Applecross.	280	110	204	,,	.	Little done here. The fishermen prosecute the herring fishing at the different lochs in the district. Returns show an improvement.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Lochcarron and Skye District—continued.																	
Kishorn (Ross-shire)	.	.	.	.	5	36	8	16	13	52	.	.	.	.	2	32	.
Lochcarron ,,	.	.	1	6	29	172	24	61	54	239	.	.	6	56	10	135	.
Loch Alsh ,,	.	.	.	.	14	59	1	3	15	62	1	8	.	.	.	42	.
Lochs Duich and Long ,,	.	.	.	.	7	27	3	6	10	33	.	.	2	7	4	32	.
Loch Hourn (Inverness-shire),	.	.	.	.	1	5	23	36	24	41	.	.	2	10	12	50	.
Sleat ,,	.	.	.	.	47	218	29	67	76	285	1	10	.	.	20	172	.
Kyleakin ,,	.	.	2	52	4	24	4	9	10	85	.	1	.	.	1	20	.
Broadford ,,	.	.	.	.	13	62	21	47	34	109	.	.	2	3	6	78	.
Scalpa Sound ,,	.	.	2	32	6	35	45	80	53	147	.	.	.	.	6	85	.
Sconcer and Braes ,,	.	.	.	.	8	36	45	88	53	124	.	.	2	20	4	132	.
Portree, Raasay, and Rona ,,	.	.	3	47	15	88	35	70	53	205	.	.	7	28	5	108	.
Troternish ,,	.	.	1	7	12	45	.	.	13	52	.	.	2	5	3	52	.
Loch Snizort ,,	1	18	.	.	13	61	15	34	29	113	.	.	3	11	5	68	.
Waternish ,,	.	.	2	47	18	52	2	2	22	101	.	.	2	6	4	66	.
Dunvegan ,,	.	.	.	.	14	47	4	6	18	53	.	.	2	11	2	50	.

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets, lines, and creels.	Loch Carron and in Raasay Sound.	2,852	526	293	Saithe and crabs.	.	Shell-fish exhibit a slight improvement, but white fish a falling off.
Nets and lines.	,,	5,913	2,393	6	Herrings, cod, eels, and mackerel.	3	The value of all kinds of fish landed is more than double that of the previous year. Mackerel is accountable for the improvement. Herring fishing practically a failure.
,,	Loch Duich.	145	39	17	Herrings and saithe.	.	Fishing a failure for a number of years back. Fishermen prosecute the fishing at the different lochs in the district.
Nets.	Loch Hourn.	19	7	36	Herrings.	.	Most of the herrings caught are landed at Mallaig and Kyle of Lochalsh, and are not accounted for in the returns for this loch.
Nets, lines and creels.	In the Sound of Sleat and in Loch Eyshort.	2,218	948	412	Cod, ling, and lobsters.	.	Most of the fishermen have crofts. There is an improvement in the returns of white fish. Herring fishing a complete failure.
Nets and lines.	Around Croulin and in Scalpa Sound.	3,543	1,594	737	Herrings, cod, haddocks, and flounders.	.	The majority of the men go away as yachtsmen during the summer months. Returns of fish landed are below the average.
,,	In Raasay Sound.	690	206	185	Herrings.	.	Little done at these creeks. Most of the fishermen have crofts. Fishing below the average.
Nets, lines, and creels.	,,	4,388	1,729	1,805	Herrings, mackerel, and lobsters.	3	A considerable improvement in the mackerel fishing. Herring fishing a failure.
,,	Around coast and in Loch Snizort.	390	121	328	Lobsters.	.	Nearly all the fishermen have crofts. The returns show little variation from those of the previous year.
,,	Around coast and in Loch Dunvegan.	1,439	641	1,748	Herrings, cod, ling, and lobsters.	1	A considerable decrease in shell-fish. White fish shows a slight improvement.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Lochcarron and Skye District—continued.																	
Glendale and Bracadale (Inverness-shire)	.	.	.	.	8	29	7	13	15	42	.	.	2	2	2	45	.
Strathaird ,,	.	.	.	.	6	27	23	46	29	73	.	.	1	5	6	60	.
Lochs Slapin and Eyshort ,,	.	.	.	.	5	24	28	54	33	78	.	.	1	4	10	62	.
Isle of Soay ,	.	.	.	.	3	10	4	6	7	16	.	.	.	.	.	13	.
Totals, .	1	18	11	191	250	1,176	350	700	612	2,085	4	19	35	201	114	1,433	.
Fort-William District.																	
Lochs Nevis and N. Morar (Inverness),	.	.	.	.	5	22	15	27	20	49	.	.	.	.	4	30	.
Mallaig and S. Morar ,,	.	.	1	5	9	34	11	17	21	56	.	.	1	8	4	39	.
Arisaig and Loch Ailort ,,	.	.	.	.	10	44	6	13	16	57	.	.	1	2	3	26	.
Simisary to Ockle Point (Argyll),	.	.	1	18	8	32	5	9	14	59	1	2	.	.	3	33	.
Ockle Point to Loch Sunart ,,	.	.	.	.	10	47	4	7	14	54	.	.	.	.	2	34	.

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Landed.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
,,	Around coast and in Loch Bracadale.	873	349	719	Herrings, cod, ling, and lobsters.	.	The fishermen devote most of their time to their crofts. The returns show an improvement over those of the previous year.
,,	Lochs Scavaig, Slapin, and Eyshort.	34	21	101	Herrings and lobsters.	.	Most of the fishermen have crofts, and only prosecute the fishing when herrings are in the lochs. The herring fishing was a complete failure.
,,	,,	18	6	289	,,	.	Little doing on this island. Fishing about the average.
		23,474	8,862	7,204		7	
Nets and lines.	Loch Nevis.	355	182	21	Herrings, cod, and ling.	1	The herring fishing in this once productive loch was again a complete failure. Returns only half those of the previous year, which was very unproductive.
,,	Lochs Nevis, Hourn and Sound of Sleat.	14,279	5,956	117	Herrings, cod, ling, eels, and skate.	6	The special features at this creek are the continued prosperity of the great-line fishing and the unfortunate recurring failure of the loch herring fishing. Landings from trawlers were confined to three months. A considerable reduction in quantity landed, chiefly in herrings.
Nets and creels.	Off coast.	191	147	329	Shell-fish.	.	More than three times the quantity landed in 1905, an increase attributable to an East Coast crew, who settled here during the year to work small lines.
Nets and lines.	Moidart Bay.	409	339	93	Cod and lobsters.	.	Some impetus seems to have been experienced here as again a fair increase is recorded. Work being less plentiful on shore doubtless had its effect.
Nets, lines, and creels.	Lochs and off the coast.	87	75	221	Cod, flounders, and lobsters.	.	A falling-off is exhibited here, which to some extent is accounted for by the boats fishing and landing elsewhere during the year.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Fort-William District—continued.																	
Lochs Sunart and Aline (Argyll)	.	.	.	.	1	6	3	4	4	10	.	.	.	.	1	10	.
Loch Eil and Fort-William (Inverness)	.	.	.	.	.	.	34	50	34	50	1	1	.	.	2	56	.
North and South Corran (Argyllshire),	.	.	.	.	2	6	10	11	12	17	.	.	.	.	1	19	.
Loch Leven and Kentallen ,,	.	.	.	.	3	8	7	5	10	13	1	3	.	.	3	20	.
Cuil, Appin, and Loch Creran ,,	.	.	.	.	4	8	7	8	11	16	.	.	.	.	3	16	.
Oban and Loch Etive (Argyllshire),	.	.	.	.	13	21	20	29	33	50	2	4	.	.	6	46	.
Lismore ,,	.	.	.	.	1	2	6	6	7	8	.	.	1	3	1	12	.
Tobermory and Salen ,,	.	.	1	10	7	33	16	25	24	68	2	.	.	3	3	35	.
Lochs Don, Spelve, and Buie ,,	.	.	.	.	1	7	9	15	10	22	.	.	.	3	.	21	.
Carsaig to Kintra ,,	.	.	.	.	1	3	3	6	4	9	.	.	.	.	.	14	.

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets.	In the lochs.	10	2	84	Herrings and Shell-fish.	.	Herring and mackerel fishing a failure.
Nets and lines.	Loch Linnhe.	517	218	11	Herrings and whitings.	.	This creek has not maintained the fairly prosperous record of last year. The reduction in the landings amounts to 368 cwts. in quantity and £181 in value.
,,	,,	137	114	6	Haddocks and whitings.	.	During the months of March and April a prosperous fishing of whitings was secured, and the results show a fair increase for the year.
,,	,,				,,	.	
,,	,,	24	10	29	Saithe and whelks.	.	Landings here are chiefly confined to saithe taken by hand lines, the returns of which show a decrease, while the value of shell-fish exhibits a good increase.
Drift, seine, and cod nets, and lines.	Loch Linnhe and Firth of Lorn.	2,186	957	52	Haddocks, whitings, cod, eels, and skates.	1	This creek continues to report an increase in the landings of fish, but there is a decrease in the value of shell-fish. Again the increase is attributable to the cod-net fishing, which was carried on by local and strange fishermen.
Nets and lines.	,,	15	9	.	Cod.	.	Very little done here during the year. The principal crews when fishing regularly land elsewhere.
Drift and cod nets, lines, and creels.	Sound of Mull.	934	543	542	Cod, eels, skate, and lobsters.	.	An increase in quantity, but a considerable decrease in the value of shell-fish. A local crew made fair earnings at Campbeltown during the summer herring fishing.
Drift nets and lines.	In the lochs.	241	79	80	Herrings and skate.	.	A reduction in the value of shell-fish. An increase in the other landings is recorded, but insignificant in proportion to the amount of time devoted to Lochbuie during the last months of the year.
Lines and creels.	Off the coast.	200	69	91	Lobsters.	.	Returns similar to those of the previous year.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Fort-William District—continued.																	
Lochs Laich and Scriddan (Argyllshire),	.	.	1	18	2	5	10	15	13	38	3	5	.	.	1	27	.
Ulva, Lochs Na-Kael and Tuadh ,,	.	.	.	.	1	2	4	6	5	8	.	.	.	.	.	11	.
Coll ,,	.	.	.	.	.	.	6	9	6	9	.	.	.	.	.	12	.
Tiree ,,	.	.	2	20	8	31	18	30	28	81	1	.	.	.	7	95	.
Iona ,,	.	.	.	.	.	.	1	2	1	2	.	.	.	.	.	3	.
Canna (Inverness),	.	.	1	17	2	5	1	1	4	23	.	.	1	2	.	14	.
Rum, Muck, and Eigg ,,	.	.	.	.	.	.	5	8	5	8	.	.	.	.	.	12	.
Totals, .	.	.	7	88	88	316	201	303	296	707	11	15	4	21	44	585	.
Campbeltown District.																	
Skipness and Clonaig, (Argyllshire),	.	.	.	.	3	14	.	.	3	14	.	.	1	4	.	6	.
Carradale and Torrisdale, &c., ,,	.	.	.	.	36	242	3	6	39	248	.	8	.	.	.	130	.

*Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets and creels.	In the lochs.	26	23	332	Herrings and shell-fish.	1	The apparent absence of herrings on this coast is again responsible for the large reduction in the landings here. No herrings taken in Loch Scriddan during the year. Shell-fish returns also show a decline.
Creels.	,,	.	.	422	Lobsters.	.	Landings almost confined to lobsters; slight decrease in value.
Lines and creels.	Off the island.	48	36	314	,,	.	A healthy increase in the value of shell-fish, but no improvement in line fishing.
,,	,,	196	54	68	Haddocks, ling, and lobsters.	.	This creek maintains the increase of last year in line fishing, but shows a slight decrease in the value of shell-fish. Haddocks seem to have been plentiful on the coast during the summer months, doubtless proving a boon to the islanders.
Lines and creels.	Sound of Iona.	182	151	72	Cod, flounders, and lobsters.	.	Except for a small decrease in the value of shell-fish, this creek maintains its improvement.
Nets, lines, and creels.	Off the islands.	702	165	231	Herrings, eels, skate, and lobsters.	1	Since the opening of the Mallaig Railway, Canna has become primarily a herring fishing station, and the failure of this branch is felt here. During the late autumn, which is usually the best time of the year, the landings were nil. Shell-fish returns about same as last year.
Creels.	,,	.	.	145	Lobsters.	.	A decrease in the value of lobsters.
		20,739	9,129	3,260		10	
Drift nets.	Kilbrannan Sound.	.	.	27	Whelks.	.	Fishermen dispose of their catches at other stations or to herring buying steamers.
Drift and seine nets, lines and lobster creels.	..	1 55	411	20	Herrings, cod, and haddocks.	.	Seine net fishing principally prosecuted, and catches generally sold at sea. Year's results poor.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Campbeltown District—continued.																	
Campbeltown and Machrihanish, &c. (Argyllshire),	.	.	2	34	99	688	12	14	113	736	4	27	.	.	3	335	.
Sanda ,,	.	.	.	.	3	17	.	.	3	17	.	.	1	1	.	4	.
Southend ,,	.	.	.	.	5	11	.	.	5	11	.	.	.	.	.	6	.
Muasdale and Ballochantee, &c. ,,	.	.	.	.	6	21	4	4	10	25	.	.	.	.	.	15	.
Gigha ,,	.	.	.	.	16	80	13	23	29	103	.	.	2	7	2	36	.
Port-Ellen ,,	.	.	.	.	13	31	.	.	13	31	1	1	.	.	.	17	.
Port-Askaig ,,	.	.	.	.	5	15	6	7	11	22	1	.	.	.	2	11	.
Portnahaven and Port-Wemyss, &c. (Argyllshire),	.	.	1	8	40	124	42	22	83	154	.	.	7	60	20	120	.
Bowmore ,,	.	.	.	.	6	9	3	5	9	14	.	.	.	.	1	18	.
Port-Charlotte ,,	.	.	.	.	8	16	.	.	8	16	.	.	.	.	1	10	.
Bruichladdich ,,	.	.	.	.	5	15	.	.	5	15	.	.	.	.	.	4	.
Loch Gruinart ,,	.	.	.	.	7	16	1	2	8	18	.	.	.	.	2	12	.
Jura ,,	.	.	.	.	3	9	3	3	6	12	.	.	1	3	.	10	.
Colonsay ,,	.	.	.	.	11	31	2	3	13	34	.	.	1	3	1	18	.
Totals.	.	.	3	42	266	1,339	89	89	358	1,470	6	36	13	78	32	752	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Drift, and seine nets, great, small, and hand-lines, and lobster creels.	Kilbrannan Sound.	41,458	19,212	384	Herrings, cod, saithe, haddocks, whitings and plaice.	5	A large decrease in quantity and value of fish landed, chiefly owing to comparative failure of the herring fishing in Kilbrannan Sound. Cod and ling fishing yielded good results, and small line fishing was fully as successful as in the previous year.
Lobster creels.	Around the island.	.	.	215	Lobsters.	.	An increase in the catch of lobsters as compared with 1905.
,,	Mull of Kintyre.	410	80	136	,,	.	Lobster and saithe fishings show considerable increases over the previous year's catches.
,,	1 to 4 miles off Ballochantee.	.	.	156	,,	.	Slight decrease, but results practically the same as the previous year.
Great lines and lobster creels.	1 to 7 miles S.W. of Cara Island	1,394	418	302	Cod and lobsters.	5	Cod and ling fishing fairly successful, showing an increase. Lobster fishing shows little change.
Lobster creels.	Mull of Oa.	28	25	438	Lobsters.	.	The lobster fishing exhibits a slight decrease.
,,	Sound of Islay.	.	.	205	,,	.	Considerable increase in the catch of lobsters.
Great and hand lines and lobster creels.	1 to 5 miles off Rhinns Lighthouse.	1,080	205	87	Cod, saithe, and lobsters.	5	A considerable increase in the quantity and value of cod landed. Saithe also shows an increase in quantity, but a decrease in value. The saithe cured-dried were exported to Ireland. Lobsters exhibit a slight falling off.
Drift nets, small lines, and lobster creels.	Lochindaal.	484	393	73	Cod, haddocks, plaice, and lobsters.	.	With the exception of a decrease in the catch of plaice, the results at these creeks were similar to those of the previous year.
,,	,,	148	94	28	,,	.	
,,	,,	99	65	40	,,	.	
Lobster creels.	Loch Gruinart Bay.	598	161	165	Saithe and lobsters.	.	Increase in total value of fish landed.
,,	Around the island.	.	.	158	Lobsters.	.	Results similar to those of the previous year.
,,	,,	.	.	261	,,	.	Lobster fishing was fairly successful, and the year's results show a substantial increase.
		47,249	21,064	2,695		15	

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Inveraray District.																	
Luing (Argyllshire),	.	.	.	.	3	11	25	32	28	43	3	3	.	.	1	34	.
Crinan and Loch Sween ,,	.	.	.	.	2	12	4	3	6	15	2	6	.	.	.	6	.
Loch Kylesport ,,	.	.	.	.	.	.	1	2	1	2	.	.	1	2	.	2	.
Tarbert ,,	.	.	.	.	90	696	4	11	94	707	.	66	7	.	5	336	.
Ardrishaig ,,	.	.	.	.	60	306	8	13	68	319	.	5	.	.	4	186	.
Lochgilphead ,,	.	.	.	.	16	93	1	2	17	95	.	.	3	12	.	70	.
Castleton ,,	.	.	.	.	10	54	1	1	11	55	.	.	.	4	1	36	.
Lochgair ,,	.	.	.	.	6	26	1	1	7	27	.	.	1	8	2	20	.
Minard ,,	.	.	.	.	9	70	5	7	14	77	.	.	.	.	.	36	.
Crarae ,,	.	.	.	.	8	48	1	1	9	49	.	1	.	.	.	24	.
Furnace ,,	.	.	.	.	5	19	2	3	7	22	1	4	.	.	1	18	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Creels.	Vicinity of Luing.	.	.	537	Lobsters.	.	Decrease in catch and value of lobsters. The principal fish merchants on the island contemplated the construction of a pond for the preservation of lobsters but, for various reasons, the work was postponed till next year.
,,	Vicinity of Crinan	.	.	151	Lobsters and oysters.	.	Increase in catch and value of lobsters.
,,	Loch Kylesport and vicinity.	.	.	183	Lobsters.	.	Only two fishermen belong to this creek, but crews from other districts fishing in local waters land their catches here. An increase of fully 50 per cent. in quantity and value.
Seine, drift, and cod nets and lines.	Loch Fyne, Kilbrannan Sound, and Firth of Clyde.	13,235	3,671	136	Herrings, mackerel, cod, ling, and saithe.	15	Quantity of herrings landed shows a substantial increase, but value practically the same as last year. An increase of about 50 per cent. in the catch and 25 per cent. in the value of mackerel. General decrease in line fishing results.
,,	,,	7,539	2,778	102	Herrings, mackerel, cod and haddocks.	9	A decrease of fully 25 per cent. in the catch and 30 per cent. in the value of herrings. During the end of April and the beginning of May a number of crews left for Loch Boisdale, where good results were obtained, the average earnings per boat being £100.
Drift and seine nets.	,,	.	.	.	None.	.	No fish landed at this creek. The whole fleet fished from Loch Boisdale during May and June, the average earnings per crew being £110.
Seine, drift, and cod nets and lines.	,,	979	615	83	Herrings, cod, and haddocks.	.	The bulk of the herrings are sold at sea. A few crews engaged in great line and cod net fishings with results slightly better than those of the previous year.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Inveraray District—continued.																	
Kenmore (Argyllshire),	.	.	.	.	3	9	1	2	4	11	.	.	.	.	.	8	.
Inveraray ,,	.	.	.	.	9	34	4	6	13	40	.	.	1	3	2	20	.
Cairndhu to Newton ,,	.	.	.	.	13	55	7	9	20	64	.	5	1	.	6	30	.
Otter Spit to Ardlamont ,,	.	.	.	.	1	4	1	2	2	6	.	.	.	.	.	3	.
Totals, .	.	.	.	.	235	1,437	66	95	301	1,532	6	90	14	29	22	829	.
Rothesay District.																	
Rothesay (Buteshire),	.	.	.	.	4	16	18	21	22	37	3	8	.	.	.	30	.
Port-Bannatyne ,,	.	.	.	.	6	15	5	5	11	20	.	.	.	.	2	16	.
St. Ninians ,,	.	.	.	.	9	39	6	7	15	46	.	.	1	2	1	14	.
Kilchattan ,,	.	.	.	.	1	6	4	4	5	10	.	.	1	1	.	9	.
Kyles of Bute (Argyllshire),	.	.	.	.	20	72	14	18	34	90	.	.	2	8	3	45	.
Toward to Holy Loch ,,	.	.	.	.	5	9	14	13	19	22	.	.	3	4	.	20	.
Blairmore, Ardentinny, and Lochgoil (Dumbartonshire),	.	.	.	.	6	20	1	1	7	21	.	.	1	1	.	8	.
Kilcreggan to Arrochar ,,	.	.	.	.	15	37	11	11	26	48	.	.	5	16	1	20	.
Lochranza and Caticol (Buteshire),	.	.	.	.	5	30	3	3	8	33	.	.	2	8	1	18	.

* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Seine and drift nets and lines.	Loch Fyne and Firth of Clyde.	262	98	.	Herrings.	. 1 . .	All the creeks in this section are annually becoming of less importance so far as the fisheries are concerned. Herrings not sold at sea are landed at Inveraray.
		22,015	7,162	1,192		25	
Drift, seine, and hake nets, beam trawls, and lines.	Between Bute and Cumbraes, Loch Striven, and Kyles of Bute.	6,366	2,657	92	Herrings, cod, haddocks. whitings, saithe, and plaice.	3	Increase in quantity and value, for which herrings are primarily responsible.
,,	,,				,,	.	Little attention was given to white fishing. Hake net fishing from Port-Bannatyne was a failure.
Drift and seine nets and lines	Between Skipness and Inchmarnock, also Kyles of Bute and Loch Fyne.	14,543	3,466	140	Herrings, and codlings.	.	Owing to a successful herring fishing being obtained off the west of Bute, there is a large increase in the quantity and value of herrings credited to this area.
Drift nets and lines.	Off the Bute coast.	342	147	12	Herrings and shell-fish.	.	Creek of little note.
Drift, seine, and hake nets and lines.	Kyles of Bute and Loch Fyne.	829	588	111	Herrings and codling.	.	No herrings entered these waters, and little was in consequence done at the fisheries. Results similar to those of last year.
Hake nets and lines.	Estuary of the Upper Clyde.	666	485	82	Codling, saithe, haddocks and whitings.	1	Very few proper fishermen in this locality now Increase in quantity and decrease in value. A small kippering kiln has been erected at Dunoon.
Drift and hake nets.	Lochs Long and Goil.	2,098	560	72	Mackerel, codling, saithe, and haddocks.	.	Mackerel were very plentiful in the autumn in Lochs Long and Goil, but few herrings were got. Dog-fish were again numerous. Increase in quantity and value.
,,	,,				,,	.	
Drift and seine nets and lines.	Kilbrannan Sound, and Loch Fyne.	821	188	1	Herrings and haddocks.	2	Slight increase, chiefly in herrings. A little curing was done on shore at Lochranza.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Rothesay District—continued.																	
Pirnmill to Blackwater (Buteshire),	.	.	.	.	12	67	3	4	15	71	.	.	1	2	1	36	.
Blackwater to Whiting Bay ,,	.	.	.	.	2	9	2	3	4	12	.	.	.	1	.	9	.
Whiting Bay to Lamlash ,,	.	.	.	.	2	8	4	4	6	12	.	.	.	.	.	10	.
† Totals,	.	.	.	.	87	328	85	94	172	422	3	8	16	43	9	235	.
Greenock District.																	
Gareloch (Dumbartonshire),	.	.	.	.	4	9	5	5	9	14	1	2	.	.	.	11	.
Helensburgh ,,	.	.	.	.	1	2	4	3	5	5	.	.	.	.	.	10	.
Glasgow (Lanarkshire),	.	.	.	.	1	3	2	2	3	5	.	.	.	.	.	4	.
Paisley (Renfrewshire),	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Port-Glasgow ,,	.	.	.	.	13	45	18	16	31	61	.	.	4	2	.	30	.
Greenock ,,	.	.	.	.	17	85	16	13	33	98	8	47	.	.	.	30	.
Gourock ,,	.	.	.	.	.	.	4	3	4	3	.	.	.	.	.	6	.
Wemyss Bay ,,	.	.	.	.	.	.	2	1	2	1	.	.	.	.	.	4	.
Largs (Ayrshire),	.	.	.	.	2	11	25	22	27	33	1	9	.	.	.	40	
Cumbraes (Buteshire),	.	.	.	.	3	6	9	8	12	14	.	.	.	.	.	20	.
Fairlie (Ayrshire),	.	.	.	.	.	.	4	4	4	4	.	.	.	.	.	6	.

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* Persons from inland centres temporarily engaged in fishing.

† *Note.*—In addition to the above there were 4 sailing trawlers

Number of men employed, 12.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Drift and seine nets and lines.	Kilbrannan Sound and Loch Fyne.	108	81	9	Haddocks.	.	Although the best crews in the district belong to Pirnmill the quantity of fish landed annually is very trifling. The crews dispose of all their catches of herrings at sea.
Drift nets, lines, and lobster creels.	S. and E. coast of Arran.	28,501	9,555	148	Herrings, mackerel, codling, haddocks, and shell-fish.	.	The quantity and value of herrings credited to these creeks is probably the largest ever recorded. Herrings were abundant in the waters off the east of Arran in the autumn. The other branches of the industry received meagre attention.
,,	,,				,,	.	
		54,274	17,727	680		6	
Nets and lines.	Gareloch.	9,825	2,336	51	Herrings and whitings	.	Fair herring fishing got in the loch in latter end of the year.
,,	Off Helensburgh.	550	412	446	Haddocks, whitings, and plaice.	.	Fishing not of much importance.
Lines.	,,	.	.	.	.	24	Two trawlers landed herrings caught by trawl taken from off the Irish coast.
.	.	.	.	.	.	2	
Nets and lines.	Clyde estuary.	32	7	607	Mussels.	1	Large increase in mussels.
Beam trawls.	,,	2,738	989	846	Herrings, plaice, and mussels.	3	Decrease in plaice.
Nets and lines.	,,	122	102	.	Codlings and saithe.	.	Slight decrease of fish landed.
Lines.	,,	477	450	.	Codlings, whitings, saithe, and plaice.	.	Little fishing carried on.
Trawls, nets and lines.	,,	3,493	1,584	.	Herrings, cod, haddocks, whitings, plaice, and mackerel.	.	Good increase in herrings
Nets and lines.	,,	1,305	704	.	Herrings, cod, mackerel and plaice	.	Increase in herrings, slight decrease in white fish.
Lines.	,,	184	107	59	Herrings, whitings, and plaice.	.	

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fishing from Rothesay, all of which were engaged in trawling.
Total tonnage of vessels, 25 tons; total value of vessels and gear, £180.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Greenock District—continued.																	
Portincross (Ayrshire)	.	.	.	.	1	2	4	4	5	6	1	1	.	.	.	6	.
Saltcoats ,,	.	.	.	.	12	45	11	18	23	63	5	22	.	.	.	35	.
Irvine ,,	.	.	.	.	18	59	3	5	21	64	.	.	1	5	.	34	.
Troon ,,	.	.	.	.	14	30	2	3	16	33	.	.	5	21	.	20	.
Totals . .	.	.	.	.	86	297	109	107	195	404	16	81	10	28	.	256	.
Ballantrae District.																	
Ayr (Ayrshire), .	.	.	.	.	14	36	2	2	16	38	.	.	.	.	1	22	.
Dunure (Wigtownshire),	.	.	.	.	42	152	5	5	47	157	1	.	.	3	.	54	.
Maidens ,,	.	.	.	.	38	94	4	4	42	98	3	14	.	.	.	40	.
Girvan ,,	.	.	1	2	47	180	3	3	51	185	.	17	1	.	8	104	.
Carleton ,,	.	.	.	.	5	18	3	3	8	21	.	.	2	4	.	13	.
Ballantrae ,,	.	.	.	.	13	32	4	4	17	36	.	.	.	.	.	40	.
Cairnryan ,,	.	.	.	.	1	2	.	.	1	2	.	.	1	4	.	3	.
Stranraer ,,	.	.	.	.	6	18	29	41	35	59	2	3	.	.	1	53	.
Kirkcolm ,,	.	.	.	.	1	3	7	8	8	11	1	2	.	.	.	12	.
Portpatrick ,,	.	.	1	11	1	5	8	12	10	28	.	.	3	5	.	22	.
Port Logan ,,	.	.	.	.	.	.	4	4	4	4	.	.	.	.	1	8	.
Drummore ,,	.	.	.	.	4	21	11	11	15	32	.	.	.	1	.	26	.

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* Persons from inland centres temporarily engaged in fishing.

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Lines.	Clyde estuary.	.	.	.	.	.	
Beam trawls, lines, and lobster creels.	,,	9,816	3,074	266	Herrings, conger, whitings, and lobsters.	2	Decrease in all kinds of fish landed, slight increase in lobsters.
Nets and lines.	,,	1,979	870	5	Herrings, whitings, mackerel, and plaice.	.	Decrease in all kinds.
Nets, lines, and creels.	,,	597	114	41	Mackerel and lobsters.	.	Slight decrease in all kinds of fish, except herrings.
		31,118	10,749	2,321		32	
Nets and lines.	Firth of Clyde.	18.175	5,120	55	Herrings, mackerel, whitings, and plaice.	10	Large increase in quantity of herrings, which were landed chiefly by stranger crews—principally from Campbeltown.
,,	,,	6,918	3,508	8	,,	.	While some fluctuations occur here and there, results resemble those of the previous year.
,,	,,	2,420	1,556	.	Herrings, cod, haddocks, and whitings.	.	The immediately preceding remarks apply here.
,	,,	9,955	4,462	349	General.	7	Large decrease in quantity of herrings landed. The total value of all fish landed, however, almost equals last year.
,,	,,						
,,	,,	2,706	1,115	70	Herrings, cod, saithe, and turbot.	2	General increase in quantity and value, especially of herrings.
,,	Loch Ryan and off Corsewall.	29,745	10,314	1,496	General.	.	Very considerable increase in total quantity and value, for which herrings are mainly responsible. Decrease in flat-fish owing to crews being engaged at herring fishing.
,,	,,					19	
,,	,,					.	
Lines and creels.	Channel.	1,441	750	154	Cod, crabs, and lobsters.	.	Results somewhat similar to last year.
Creels.	Off the station.	.	.	44	Crabs and lobsters.	.	Creek of little importance; the lobster and crab fishing yielded poor returns.
Lines and creels.	Luce Bay.	445	208	45	Mackerel, cod, crabs, and lobsters.	.	Except in the catch of mackerel there is a general decrease. Total value, half of last year.

APPENDIX A.—

Station or Creek.	Fishing Boats and Vessels (excluding Trawlers) belonging to Creek.														Seaworthy Boats Unlaunched.	Resident Fishermen and Boys.	*Non-Resident Fishermen and Boys.
	1st Class.				2nd Class.		3rd Class.		Total.		Increase on 1905.		Decrease from 1905.				
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	Ton.	No.	No.	No.
Ballantrae District—continued.																	
Sandhead (Wigtownshire),	.	.	.	.	6	14	9	9	15	23	1	1	.	.	.	22	.
Glenluce ,,	.	.	.	.	5	15	6	6	11	21	.	.	2	10	.	24	.
Port-William ,,	.	.	.	.	5	17	12	11	17	28	.	.	1	2	1	23	.
Whithorn Isle ,,	.	.	.	.	2	9	19	21	21	30	3	1	.	.	.	18	.
Garliestown ,,	.	.	.	.	2	9	8	8	10	17	.	.	1	1	.	16	.
Creetown ,,	.	.	.	.	1	2	10	10	11	12	1	2	.	.	.	15	.
Kirkcudbright ,,	.	.	.	.	.	.	5	5	5	5	.	.	1	1	.	13	.
Carsethorn (Dumfries-shire),	.	.	.	.	.	.	.	.	.	.	.	.	1	6	.	20	.
Caerlaverock ,,	.	.	.	.	.	.	.	.	.	.	.	.	.	.		23	.
Powfoot ,,	.	.	.	.	.	.	.	.	.	.	.	.	.	.		16	
Annan ,,	.	.	.	.	1	2	1	1	2	3	.	.	.	.	.	.	
† Totals, .	.	.	2	13	194	629	150	168	346	810	12	40	13	7	7	587	.
Grand Totals, 1906	2,732	91304	737	11040	2,808	12725	3,666	6,241	9943	121310	.	.	304	000	339	32,178	1,242
Grand Totals, 1905	2,748	91358	864	13309	2,910	12840	3,725	6,803	10247	124310	.	.	304	3,912	259	32,338	1,146

* Persons from inland centres temporarily engaged in fishing.

† *Note.*—In addition to the above there was 1 steamer fishing from

No. II.—*continued.*

Methods of Fishing Pursued.	Position of Principal Fishing Grounds.	Quantity and Value of Fish Landed (excluding Shell Fish).		Value of Shell Fish Taken.	Principal Kinds of Fish Landed.	No. of Curing Stations.	General Remarks.
		Cwts.	£	£			
Nets, lines, and creels.	Luce Bay.	436	217	144	Mackerel, cod, crabs, and lobsters.	.	The little difference here is in favour of the present year.
,,	,,	469	387	67	Flat-fish, skate, and lobsters.	.	A slight improvement on last year's returns are shown.
Lines and creels.	,,	179	110	106	Cod, crabs, and lobsters.	.	A poor year was experienced, lobsters and crabs being scarce.
,,	Off the station.	57	40	277	Cod and lobsters.	.	Similar to preceding year.
Lines.	Wigtown Bay.	148	116	9	Mackerel, cod, and plaice.	.	The total value is only half of last year's. The decrease occurs in shell-fish.
Nets and shrimp trawls.	,,	49	135	573	Sparlings and mussels.	.	Generally the results are better than in 1905.
Lines and creels.	,,	31	28	122	Lobsters and whelks.	.	A general decrease is observed here.
Stake nets.	Nith Estuary.	188	112	139	Flounders and shell-fish.	.	Similar to preceding year.
,,	,,	410	245	210	,,	.	Results not quite so good as in 1905.
,,	Solway Firth.	40	32	.	Flounders and cod.	.	General decrease. Creek of little account.
Beam trawling.	,,	1,670	1,628	3,511	Flounders, plaice, skate, and shrimps.	.	The decrease here amounts to £532, which is referable to a shorter catch of flounders, plaice, and skate. Shrimps remain about the same as last year.
		75,482	30,083	7,379		38	
		7,593,369	2,977,593	72,322		1,087	
		7,856,310	2,649,148	70,662		1,035	

Stranraer and Carsethorn which was engaged in trawling.

APPENDIX A.—No. III.

RETURN, for the Year 1906, showing the largest Number of Boats, Decked and Undecked, *irrespective* of the places to which they belong, employed fishing for Herrings, as well as the Number of Persons engaged in that industry, in each District in Scotland at *one* time.

DISTRICTS.	Boats.	Fishermen and Boys.	Curers.	Coopers.	Gutters and Packers.	Labourers.	Total Persons Employed.
Eyemouth,	199	1,352	52	169	911	115	2,599
Leith,	20	120	5	6	9	5	145
Anstruther,	270	1,659	60	121	204	39	2,083
Montrose,	70	478	12	36	375	43	944
Stonehaven,	22	150	4	16	111	7	288
Aberdeen,	260	1,850	68	219	1,783	735	4,655
Peterhead,	405	2,937	67	413	2,249	216	5,882
Fraserburgh,	560	3,920	77	504	2,707	470	7,678
Banff,	49	331	14	36	223	19	623
Buckie,	55	455	12	42	312	20	841
Findhorn,	45	327	9	28	126	14	504
Cromarty,	2	14	1	2	6	1	24
Helmsdale,	12	72	3	4	51	3	133
Lybster,	18	117	5	9	54	5	190
Wick,	330	2,430	69	268	1,563	135	4,465
Orkney,	118	826	18	100	639	55	1,638
Shetland,	1,407	10,580	180	1,455	7,617	354	20,186
Stornoway,	330	2,340	53	136	1,255	105	3,889
Barra,	512	3,428	36	118	846	50	4,478
Loch Broom,	120	600	9	20	35	12	676
Loch Carron and Skye,	80	260	9	3	45	3	320
Fort-William,	48	140	2	...	3	5	150
Campbeltown,	220	990	7	1	24	12	1,034
Inveraray,	160	619	25	7	123	11	785
Rothesay,	400	1,343	6	...	53	11	1,413
Greenock,	372	1,288	27	26	338	75	1,754
Ballantrae,	166	661	38	20	...	20	739

APPENDIX B.—No. I.

FISH LANDED.—STATEMENT of the Total Quantity and Value of Herrings taken by Nets from Steamers and Sailing Boats respectively and landed in SCOTLAND during the various Seasons of the Year 1906.

No.	DISTRICTS.	WINTER. (1st Jan. to 31st Mar.)						EARLY SUMMER, (1st April to 30th June.	
		Steam.		Sail.		Total.		Steam.	
		Cwts. Landed.	Value.	Cwts. Landed.	Value.	Cwts. Landed.	Value.	Cwts. Landed.	Value.
	EAST COAST.		£		£		£		£
1	Eyemouth	–	–	22,815	8,081	22,815	8,081	–	–
2	Leith	–	–	18,146	7,320	18,146	7,320	424	86
3	Anstruther	752	306	119,309	41,938	120,061	42,244	–	–
4	Montrose	49	14	1,260	493	1,309	507	112	25
5	Stonehaven	–	–	–	–	–	–	–	–
6	Aberdeen	–	–	–	–	–	–	9,441	2,250
7	Peterhead	2,842	731	10	5	2,852	736	62,044	15,165
8	Fraserburgh..	–	–	–	–	–	–	49,788	12,121
9	Banff	161	23	–	–	161	23	948	192
10	Buckie	929	239	436	141	1,365	380	3,593	722
11	Findhorn	157	56	120	47	277	103	648	122
12	Cromarty	–	–	–	–	–	–	–	–
12	Helmsdale	–	–	294	132	294	132	–	–
14	Lybster	–	–	335	150	335	150	–	–
15	Wick	12,669	4,458	10,267	4,006	22,936	8,464	30,499	6,934
	East Coast Totals carried down	17,559	5,827	172,992	62,313	190,551	68,140	157,497	37,617
	Orkney and Shetland.								
16	Orkney	28	6	679	180	707	186	5,318	1,411
17	Shetland	108	37	620	173	728	210	110,714	32,203
	Orkney & Shetland Totals carried down	136	43	1,299	353	1,435	396	116,032	33,614
	WEST COAST.								
18	Stornoway	120,099	34,983	23,527	6,805	143,626	41,788	6,300	2,357
19	Barra	18	4	1,623	495	1,641	499	36,487	21,778
20	Loch Broom..	–	–	90	20	90	20	–	–
21	Loch Carron and Skye ..	–	–	1,307	388	1,307	388	–	–
22	Fort-William	70	11	552	145	622	156	68	23
23	Campbeltown	–	–	8,626	3,549	8,626	3,549	–	–
24	Inveraray	–	–	49	7	49	7	–	–
24	Rothesay	–	–	198	33	198	33	–	–
25	Greenock	–	–	1,768	310	1,768	310	–	–
26	Ballantrae	–	–	4,046	1,267	4,046	1,267	–	–
27									
	West Coast Totals carried down	120,187	34,998	41,786	13,019	161,973	48,017	42,855	24,158
	Totals brought down.								
	East Coast	17,559	5,827	172,992	62,313	190,551	68,140	157,497	37,617
	Orkney and Shetland ..	136	43	1,299	353	1,435	396	116,032	33,614
	West Coast	120,187	34,998	41,786	13,019	161,973	48,017	42,855	24,158
	Grand Totals for 1906 ..	137,882	40,868	216,077	75,685	353,959	116,553	316,384	95,389
	Grand Totals for 1905 ..	–	–	–	–	478,988	103,937	–	–
	Increase in 1906	–	–	–	–	–	12,616	–	–
	Decrease in 1906	–	–	–	–	125,029	–	–	–

APPENDIX B.—

FISH LANDED.—STATEMENT of the Total Quantity and Value of Herrings taken by Nets
Seasons of the

No.	DISTRICTS.	EARLY SUMMER—*continued.* (1st April to 30th June.)				GREAT SUMMER AND AUTUMN. (1st July to 31st Dec.)			
		Sail.		Total.		Steam.		Sail.	
		Cwts. Landed.	Value.	Cwts. Landed.	Value.	Cwts. Landed.	Value.	Cwts. Landed.	Value.
	EAST COAST.		£		£		£		£
1	Eyemouth	25,775	3,393	25,775	3,393	–	–	145,148	29,464
2	Leith	1,904	401	2,328	487	–	–	6,296	1,233
3	Anstruther	2,281	449	2,281	449	8,326	2,548	44,539	9,437
4	Montrose	2,436	485	2 548	510	2,422	833	47,775	14,350
5	Stonehaven	5,408	998	5,408	998	–	–	16,668	4,815
6	Aberdeen	32,007	6,339	41,448	8,589	115,035	41,722	206,002	66,127
7	Peterhead	115,948	26,205	177,992	41,370	134,874	51,578	353,104	122,497
8	Fraserburgh	123,322	26.772	173,110	38,893	80,617	27,141	449,724	152,760
9	Banff	11,402	2,434	12,350	2,626	924	283	21,067	6,333
10	Buckie	18,890	4,052	22,483	4,774	3,332	955	13,582	3,997
11	Findhorn	10,221	1,681	10,869	1,803	2,975	808	22,456	5,501
12	Cromarty	–	–	–	–	–	–	222	45
13	Helmsdale	434	86	434	86	–	–	2,086	516
14	Lybster	994	243	994	243	–	–	4,702	1,395
15	Wick	110,059	23,742	140,558	30,676	51,958	16,449	148,288	46,916
	East Coast Totals carried down	461,081	97,280	618,578	134,897	400,463	142.317	1,481,659	465,386
	Orkney and Shetland.								
16	Orkney	20,971	5,642	26,289	7,053	20,629	7,648	80,468	25,209
17	Shetland	270,097	61,333	380,811	93,536	690,242	303,772	534,477	203,876
	Orkney & Shetland Totals carried down	291,068	66,975	407,100	100,589	710,871	311,420	614,945	229,085
	WEST COAST.								
18	Stornoway	20,877	8,506	27,177	10,863	33	16	18,040	5,662
19	Barra	88,881	37,964	125,368	59,742	–	–	31,909	11,027
20	Loch Broom..	1,523	266	1,523	266	–	–	11,081	3,282
21	Loch Carron and Skye ..	916	316	916	316	–	–	2,063	688
22	Fort-William	370	89	438	112	–	–	824	234
23	Campbeltown	15,696	5,260	15,696	5,260	–	–	14,423	7,756
24	Inveraray	5,068	1,630	5,068	1,630	–	–	13,286	4,270
25	Rothesay	840	265	840	265	–	–	46,944	13,918
26	Greenock	636	105	636	105	605	346	24,502	7,025
27	Ballantrae	1,264	664	1,264	664	–	–	49,637	15,469
	West Coast Totals carried down	136,071	55,065	178,926	79,223	638	362	212,709	69,331
	Totals brought down.								
	East Coast	461,081	97,280	618,578	134,897	400,463	142,317	1,481,659	465,386
	Orkney and Shetland ..	291,068	66,975	407,100	100,589	710,871	311,420	614,945	229,085
	West Coast	136,071	55,065	178,926	79,223	638	362	212,709	69,331
	Grand Totals for 1906 ..	888,220	219.320	1,204,604	314,709	1,111,972	454,099	2,309,313	763,802
	Grand Totals for 1905 ..	–	–	807,491	210,573	–	–	–	–
	Increase in 1906	–	–	397,113	104,136	–	–	–	–
	Decrease in 1906	–	–	–	–	–	–	–	–

No. I.—*continued.*

from Steamers and Sailing Boats respectively and landed in SCOTLAND during the various Year 1906.

GREAT SUMMER AND AUTUMN—*cont'd.* (1st July to 31st Dec.)		TOTALS.				GRAND TOTAL.		No.
Total.		Steam.		Sail.				
Cwts. Landed.	Value.	Cwts. Landed.	Value.	Cwts. Landed.	Value.	Cwts. Landed.	Value.	
	£		£		£		£	
145,148	29,464	–	–	193,738	40,938	193,738	40,938	1
6,296	1,233	424	86	26,346	8,954	26,770	9,040	2
52,865	11,985	9,078	2,854	166,129	51,824	175,207	54,678	3
50,197	15,183	2,583	872	51,471	15,328	54,054	16,200	4
16,668	4,815	–	–	22,076	5,813	22,076	5,813	5
321,037	107,849	124,476	43,972	238,009	72,466	362,485	116,438	6
487,978	174,075	199,760	67,474	469,062	148,707	668,822	216,181	7
530,341	179,901	130,405	39,262	573,046	179,532	703,451	218,794	8
21,991	6,616	2,033	498	32,469	8,767	34,502	9.265	9
16,914	4,952	7,854	1,916	32,908	8,190	40,762	10,106	10
25,431	6,309	3,780	986	32,797	7,229	36,577	8,215	11
222	45	–	–	222	45	222	45	12
2,086	516	–	–	2,814	734	2,814	734	13
4,702	1,395	–	–	6,031	1,788	6,031	1,788	14
200,246	63,365	95,126	27,841	268,614	74,664	363,740	102,505	15
1,882,122	607,703	575,519	185,761	2,115,732	624,979	2,691,251	810,740	
101,097	32,857	25,975	9,065	102,118	31,031	128,093	40,096	16
1,224,719	507,648	801,064	336,012	805,194	265,382	1,606,258	601,394	17
1,325,816	540,505	827,039	345,077	907,312	296,413	1,734,351	641,490	
18,073	5,678	126,432	37,356	62,444	20,973	188,876	58,329	18
31,909	11,027	36,505	21,782	122,413	49,486	158,918	71,268	19
11,081	3,282	–	–	12,694	3,568	12,694	3,568	20
2,063	688	–	–	4,286	1,392	4,286	1,392	21
824	234	138	34	1,746	468	1,884	502	22
14,423	7,756	–	–	38,745	16,565	38,745	16,565	23
13,286	4,270	–	–	18.403	5,907	18,403	5,907	24
46,944	13,918	–	–	47,982	14,216	47,982	14,216	25
25,107	7,371	605	346	26,906	7,440	27,511	7,786	26
49,637	15,469	–	–	54,947	17,400	54,947	17,400	27
213,347	69,693	163,680	59,518	390,566	137,415	554,246	196,933	
1,882,122	607,703	575,519	185,761	2,115,732	624,979	2,691,251	810,740	
1,325,816	540,505	827,039	345,077	907,312	296,413	1,734,351	641,490	
213,347	69,693	163,680	59,518	390,566	137,415	554,246	196,933	
3,421,285	1,217,901	1,566,238	590,356	3,413,610	1,058,807	4,979,848	1,649,163	
4,056,298	1,028,570	–	–	–	–	5,342,777	1,343,080	
–	189,331	–	–	–	–	–	306,083	
635,013	–	–	–	–	–	362,929	–	

APPENDIX B.—No. II.

Return respecting Vessels arriving and Fish landed in the District of **Eyemouth** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing,	Trawls.		Lines.						Nets.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		–		4,517		4,517		–		4,482		4,482					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	–	–	193,738	40,938	193,738	40,938	193,738	40,938	122,883	26,752
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	232	85	232	85	232	85	420	140
Cod	–	–	–	–	40	40	40	40	–	–	–	–	–	–	40	40	–	–
Codling	–	–	–	–	2,786	1,479	2,786	1,479	–	–	–	–	–	–	2,786	1,479	2,812	1,470
Ling	–	–	–	–	234	245	234	245	–	–	–	–	–	–	234	245	270	255
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish)	–	–	–	–	66	13	66	13	–	–	–	–	–	–	66	13	110	21
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–		–	3,128	2,794	3,128	2,794	–	–	–	–	–	–	3,128	2,794	2,726	2,754
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Whitings	–	–	–	–	1,517	1,456	1,517	1,456	–	–	–	–	–	–	1,517	1,456	859	787
Conger Eels	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	10
Gurnards	–	–	–	–	–	–			–		–	–	–	–	–	–	–	–

Catfish	–	–	–	–	61	35	61	35	–	–	–	–	–	–	61	35	8	3
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	10
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2
Flounders	–	–	–	–	10	9	10	9	–	–	–	–	–	–	10	9	18	16
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7	5
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	3
Unclassified Kinds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	27	14
Totals	–	–	–	–	7,842	6,071	7,842	6,071	–	–	193,970	41,023	193,970	41,023	201,812	47,094	130,165	32,242
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,974	197	5,226	241
Crabs - ,,	–		–	–	–	–	–	–	–	–	–	–	–	–	313,000	1,894	326,100	1,899
Unclassified - Cwts.	–		–	–	–	–	–	–	–	–	–	–	–	–	299	55	295	51
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,146	–	2,191
TOTAL VALUE OF ALL FISH		–	–	–	–	–	–	–	–	–	–	–	–	–	–	49,240	–	34,433
Fish used for Manure } included above	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait } included above	–	–	–	–	860	386	860	386	–	–	–	–	–	–	860	386	–	

APPENDIX B.—No. II.—*Continued.*

Return respecting Vessels arriving and Fish landed in the District of **Leith** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing - -	Trawls.		Lines.						Nets.						1906. Grand Total Quantity and Value.		1905. Grand Total Quantity and Value.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.					
No. of Vessels arriving - -	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port - - -	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings - - - -	–	–	–	–	–	–	–	–	424	86	26,346	8,954	26,770	9,040	26,770	9,040	41,768	9,320
Sprats - - -	–	–	–	–	–	–	–	–	–	–	1,332	513	1,332	513	1.332	513	1,250	331
Sparling - - -	–	–	–	–	–	–	–	–	–	–	98	140	98	140	98	140	319	377
Mackerel - - -	–	–	–	–	–	–	–	–	–	–	87	39	87	39	87	39	120	38
Cod - - - -	70,687	33,018	1,826	1,264	10,399	5,966	12,225	7,230	–	–	501	236	501	236	83,413	40,484	94,069	44,266
Codling - - -																		
Ling - - - - -	3,803	1,690	373	260	416	335	789	595	–	–	–	–	–	–	4,592	2,285	5,171	2,699
Torsk (Tusk) - - -	–	–	5	2	–	–	5	2	–	–	–	–	–	–	5	2	–	–
Saithe (Coal Fish) - -	3,615	778	167	37	147	48	314	85	–	–	–	–	–	–	3,929	863	5,081	1,243
Haddocks, ex. Large -	209,442	70,997	–	–	12,025	8,813	12,025	8,813	–	–	–	–	–	–	221,467	79,810	139,389	66,661
,, Large -																		
,, Medium -																		
,, Small -																		
Whitings - - - -	32,619	9,338	–	–	643	340	643	340	–	–	–	–	–	–	33,262	9,678	30,304	10,651
Conger Eels - - -	–	–	–	–	127	94	127	94	–	–	–	–	–	–	127	94	83	117
Gurnards - - - -	2,548	364	–	–	–	–	–	–	–	–	–	–	–	–	2,548	364	3,113	537

Catfish	5,544	2,219	–	–	188	116	188	116	–	–	–	–	–	–	5,732	2,335	6,009	2,188
Monks (Anglers)	777	231	–	–	–	–	–	–	–	–	–	–	–		777	231	694	240
Hake	120	45		–	–	–	–	–	–	–	–	–	–	–	120	45	5	3
Squids	632	301		–	–	–	–	–	–	–	–	–	–		632	301	294	170
Turbot	1,953	3,846	–	–	4	14	4	14	–	–	–	–	–	–	1,957	3,860	2,897	7,590
Halibut	3,042	4,914	76	118	17	32	93	150	–	–	–	–	–	–	3,135	5,064	2.060	3,838
Lemon Soles	11,581	14,794		–	30	73	30	73	–	–	–	–	–	–	11,611	14,867	10,810	14,300
Flounders	3,999	4,164		–	747	554	747	554	–	–	1,508	1,301	1,508	1,301	6,254	6,019	7.131	7,068
Plaice, Large	17,275	16,972	–	–	156	154	156	154	–	–	–	–	–		17,431	17,126	11,161	11,439
,, Medium																		
,, Small																		
Brill	612	750	–	–	–	–	–	–	–	–	–	–	–	–	612	750	679	794
Dabs	2,123	589	–	–	83	81	83	81	–	–	–	–	–	–	2,206	670	2,445	764
Witches	722	708	–	–	–	–	–	–	–	–	–	–	–	–	722	708	994	884
Megrims	556	309	–	–	–	–	–	–	–	–	–	–	–	–	556	309	412	276
Skates and Rays	3,157	750	231	132	268	186	499	318	–	–	132	72	132	72	3,788	1,140	4,737	1,285
Unclassified kinds	989	255	–	–	–	–	–	–	–	–	–	–	–	–	989	255	353	91
Totals	375,796	167,032	2,678	1,813	25,250	16,806	27,928	18,619	424	86	30,004	11,255	30,428	11.341	434.152	196,992	371.348	187,170
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	147	47
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,681	421	4,925	561
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,340	1,075	7,468	1,093
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,634	392	12,564	590
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	506.376	1,952	438,700	1,568
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,867	451	2,321	373
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,291	–	4.232
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	201,283	–	191,402
Fish used for Manure		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*Continued.*

Return respecting Vessels arriving and Fish landed in the District of **Anstruther** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing	Trawls.		Lines.						Nets.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		9		11,553		11,562		99		10,369		10,468					
Aggregate No. of Days absent from Port	–		42		11,705		11,747		11		11,416		11,529					
	Quant'ty	Value	Quant'ty	Value	Quant'ty	Value	Quant'ty	Value	Quant'ty	Value	Quant'ty	Value	Quant'ty	Value				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	9,078	2,854	166,129	51,824	175,207	54,678	175,207	54,678	159,359	36,480
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	260	13
Sparlings	–	–	–	–	–	–	–	–	–	–	121	242	121	242	121	242	168	336
Mackerel	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7	6
Cod Codling	–	–	73	33	8,633	5,059	8,706	5,092	–	–	939	327	939	327	9,645	5,419	14,883	7,532
Ling	–	–	16	13	249	206	265	219	–	–	–	–	–	–	265	219	571	271
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	6
Saithe (Coal Fish)	–	–	4	1	450	150	454	151	–	–	–		–	–	454	151	767	195
Haddocks, ex. Large " Large " Medium " Small	–				11,534	7,989	11,534	7,989	–		–			–	11,534	7,989	7,597	5,584
Whitings	–	–	–	–	343	135	343	135	–	–	–		–	–	343	135	376	260
Conger Eels	–	–	–	–	33	27	33	27	–	–	–	–	–	–	33	27	37	51
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–		–	–	–

Catfish	–	–	–	–	22	11	22	11	–	–	–	–	–	–	22	11	8	4
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	2	4	26	55	28	59	–	–	–	–	–	–	28	59	99	177
Lemon Soles,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Flounders,	–	–	–	–	33	27	33	27	–	–	67	67	67	67	100	94	172	167
Plaice, Large ,, Medium ,, Small	–	–	–	–	589	540	589	540	–	–	1,145	1,021	1,145	1,021	1,734	1,561	969	886
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	527	253	527	253	–	–	–	–	–	–	527	253	387	220
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	12	3	102	31	114	34	–	–	–	–	–	–	114	34	370	73
Unclassified kinds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Totals	–	–	107	54	22,541	14,483	22,648	14,537	9,078	2,854	168,401	53.481	177,479	56,335	200,127	70,872	186,047	52,261
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	19,097	989	16,839	890
Clams ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	-	240	17
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12,455	513	19,419	797
Crabs ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	234,100	1,864	264,700	1,713
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,112	261	1,024	246
Total Value	–	–	–	–	–	–	–	–	–	–	–	–		–	–	3,627	–	3,663
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–		74,499	–	55,924
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	260	13
,, ,, Bait (included above)	–	–	–	–	–	–	–		–	–	–	–	–	–	818	233	4,160	477

APPENDIX B.—No. II.—*Continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Montrose** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING,	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	1,561		12		19,229		19,241		27		1,350		1,377					
Aggregate No. of Days absent from Port	3,288		—		—		—		—		—		—					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	2,583	872	51,471	15,328	54,054	16,200	54,054	16,200	52,178	10,921
Sprats		-	–	–	–	–	–	–	–	–	245	46	245	46	245	46	4,242	615
Sparlings	–	–	–	-	–	–	–	-	–	–	11	29	11	29	11	29	40	44
Mackerel	–	–	–	–	–	–	–	–	15	9	217	77	232	86	232	86	493	256
Cod	4,119	3,375	261	180	–	–	261	180	–	–	–	–	–	–	4,380	3,555	–	–
Codling	7,486	2,963	2	2	11,964	5,563	11,966	5,565	–	–	111	50	111	50	19,563	8,578	38,910	17,549
Ling	735	609	60	45	41	31	101	76	–	–	–	–	–	-	836	685	1,066	607
Torsk (Tusk)	2	2	–	–	–	–	–	–	–	–	–	–	–	–	2	2	–	–
Saithe (Coal Fish)	348	132	24	7	29	7	53	14	–	–	–	–	–	–	401	146	1,032	198
Haddocks, ex. Large	–	–																
,, Large	5,774	4,597	–	–	24,215	13,294	24,215	13,294	–	–	–	–	–	–	79,542	29,519	56,610	28,854
,, Medium	5,885	3,260																
,, Small	43,668	8,368																
Whitings	5,143	1,583	–	–	3,036	1,758	3,036	1,758	–	-	–	–	–	–	8,179	3,341	13,083	4,082
Conger Eels	19	11	-	–	38	19	38	19	–	–	–	–	–	–	57	30	45	34
Gurnards	1,984	455	–	–	–	–	–	–	–	–	–	–	–	–	1,984	455	991	263

Catfish	991	567	1	1	41	20	42	21	–	–	–	–	–	–	1,033	588	702	307
Monks (Anglers)	562	184	–	–	–	–	–	–	–	–	–	–	–	–	562	184	551	137
Hake	10	8	–	–	–	–	–	–	–	–	–	–	–	–	10	8	123	54
Squids	222	142	–	–	–	–	–	–	–	–	–	–	–	–	222	142	239	116
Turbot	512	1,950	–	–	–	–	–	–	–	–	–	–	–	–	512	1,950	477	2,044
Halibut	143	328	25	62	22	47	47	109	–	–	–	–	–	–	190	437	212	635
Lemon Soles	2,466	6,016	–	–	15	47	15	47	–	–	–	–	–	–	2,481	6,063	2,439	3,956
Flounders	1,144	1,115	–	–	62	31	62	31	–	–	–	–	–	–	1,206	1,146	73	38
Plaice, Large	85	99																
,, Medium	1,252	2,439	–	–	1,116	773	1,116	773	–	–	19	13	19	13	3,884	4,445	4,692	4,338
,, Small	1,412	1,121																
Brill	95	154	–	–	–	–	–	–	–	–	–	–	–	–	95	154	53	86
Dabs	372	165	–	–	436	283	436	283	–	–	11	5	11	5	819	453	738	394
Witches	140	227	–	–	–	–	–	–	–	–	–	–	–	–	140	227	90	65
Megrims	174	208	–	–	–	–	–	–	–	–	–	–	–	–	174	208	249	161
Skates and Rays	311	167	49	29	16	10	65	39	–	–	–	–	–	–	376	206	1,301	526
Unclassified Kinds	19	3	–	–	–	–	–	–	–	–	–	–	–	–	19	3	181	26
Totals	85,073	40,248	422	326	41,031	21,883	41,453	22,209	2,598	881	52,085	15,548	54,683	16,429	181,209	78,886	180,810	76,306
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	41,554	2,080	38,021	1,901
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	3	95	11
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	13,035	548	11,131	454
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	215,754	1,384	137,552	917
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,475	208	1,255	188
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,223	–	3,471
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	83,109	–	79,777
Fish used for Manure	3,610	117	–	–	–	–	–	–	–	–	–	–	–	–	3,610	117	739	28
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*Continued.*

Return respecting Vessels arriving and Fish landed in the District of **Stonehaven** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing	Trawls.		Lines.						Nets.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	—		—		8,524		8,524		—		512		512					
Aggregate No. of Days absent from Port	—		—		—		—		—		—		—					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.		Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	–	–	22,076	5,813	22,076	5,813	22,076	5,813	18,567	3,569
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cod	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Codling	–	–	–	–	4,327	1,882	4,327	1,882	–	–	–	–	–	–	4,327	1,882	4,670	1,814
Ling	–	–	–	–	58	33	58	33	–	–	–	–	–	–	58	33	171	69
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish)	–	–	–	–	80	23	80	23	–	–	–	–	–	–	80	23	90	22
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–	–	–	11,760	5,137	11,760	5,137	–	–	–	–	–	–	11,760	5,137	6,678	3,425
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Whitings	–	–	–	–	2,984	1,453	2,984	1,453	–	–	–	–	–	–	2,984	1,453	2,491	1,199
Conger Eels	–	–	–	–	2	1	2	1	–	–	–	–	–	–	2	1	–	–
Gurnard	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	–	–	25	25	25	25	–	–	–	–	–	–	25	25	48	48
Lemon Soles	–	–	–	–	52	52	52	52	–	–	–	–	–	–	52	52	19	19
Flounders	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–	–	–	29	29	29	29	–	–	–	–	–	–	29	29	55	51
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	110	55	110	55	–	–	–	–	–	–	110	55	116	58
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	60	20	60	20	–	–	–	–	–	–	60	20	360	71
Unclassified kinds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Totals	–	–	–	–	19,487	8,710	19,487	8,710	–	–	22,076	5,813	22,076	5,813	41,563	14,523	33,265	10,345
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,405	69	95	49
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	131,750	1,264	171,900	1,045
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	68	8	57	8
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,341	–	1,102
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	15,864	–	11,447
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	625	183	–	–

APPENDIX B.—No. II.—*Continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Aberdeen** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING - -	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of vessels arriving - -	8,836		1,805		9,153		10,958		1,240		3,457		4,697					
Aggregate No. of Days absent from Port - - -	–		–		–				–				–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt-	£	Cwt.	£
Herrings - - - -	456	239	–	–	–	–	–	–	124,020	43,733	238,009	72,466	362,029	116199	362,485	116,438	237,718	52,221
Sprats - - - -		–	–	–	–	–	–	–	–	–	–	–	–	–		–	–	–
Sparlings - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–		–	–	–
Mackerel - - - -	1,033	664	–	–	–	–	–	–	286	122	460	183	746	305	1,779	959	694	319
Cod - - - -	283,055	117,573	41,817	26,493	2,401	1,458	44,218	27,951	–	–	–	–	–	–	327,273	145,524	359,302	163,140
Codling - - - -	97,123	45,232	1,963	853	2,193	1,115	4,156	1,968	–	–	–	–	–	–	101,279	47,200		
Ling - - - -	55,245	14,615	40,872	14,123	510	237	41,382	14,360	–	–	–	–	–	–	96,627	28,975	106,795	30,021
Torsk (Tusk) - - -	1,840	498	5,994	1,648	1	–	5,995	1,648	–	–	–	–	–	–	7,835	2,146	9,942	2,576
Saithe (Coal Fish) - -	69,389	13.798	4,500	954	655	143	5,155	1,097	–	–	–	–	–	–	74,544	14,895	80,798	14,682
Haddocks, ex. Large - -	69,363	25,219	114	46	–	–	114	46	–	–	–	–	–	–	69,477	25,265	606,706	359,959
,, Large - -	224.292	180,645	–	–	–	–	–	–	–	–	–	–	–	–	224,292	180,645		
,, Medium - -	93,919	61,308	–	–	19,053	8,101	19,053	8,101	–	–	–	–	–	–	112,972	69,409		
,, Small - - -	215,740	54,699	–	–	–	–	–	–	–	–	–	–	–	–	215,740	54,699		
Whitings - - - -	82,229	31,360	–	–	6,519	3,201	6,519	3,201	–	–	–	–	–	–	88,748	34,561	124,183	44,691
Conger Eels - - -	280	77	1,747	931	2	1	1,749	932	–	–	–	–	–	–	2,029	1,009	2,234	973
Gurnards - - - -	2,410	222	–	–	–	–	–	–	–	–	–	–	–	–	2,410	222	3,274	445

Catfish		13,661	3,143	73	15	1	–	74	15	–	–	–	–	–	–	13,735	3,158	11,511	2,463
Monks (Anglers)		13,581	2,351	–	–	–	–	–	–	–	–	–	–	–	–	13,581	2,351	12,234	2.222
Hake		25,006	15,907	146	73	–	–	146	73	–	–	–	–	–	–	25,146	15,980	33,441	16,200
Squids		1,904	1,495	–	–	–	–	–	–	–	–	–	–	–	–	1,904	1,495	1,460	1,094
Turbot		2,994	12,069	–	–	–	–	–	–	–	–	–	–	–	–	2,994	12,069	2,839	11,222
Halibut		9,494	16,804	20,326	38,807	105	203	20,431	39,010	–	–	–	–	–	–	29,925	55,814	28,568	48,916
Lemon Soles		18,521	44,362	–	–	–	–	–	–	–	–	–	–	–	–	18,521	44,362	17,441	36.790
Flounders		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4	3
Plaice, Large		4,938	6,156	–	–	–	–	–	–	–	–	–	–	–	–	4,938	6,156	30,523	53,268
,, Medium		20,802	41,688	–	–	–	–	–	–	–	–	–	–	–	–	20,802	41,688		
,, Small		1,774	2,018	–	–	139	200	139	200	–	–	–	–	–	–	1,913	2,218		
Brill		322	750	–	–	–	–	–	–	–	–	–	–	–	–	322	750	272	689
Dabs		1,307	600	–	–	565	340	565	340	–	–	–	–	–	–	1,872	940	1,898	854
Witches		15,803	22,900	–	–	–	–	–	–	–	–	–	–	–	–	15,803	22,900	20,158	21,472
Megrims		9,967	9,847	–	–	–	–	–	–	–	–	–	–	–	–	9,967	9,847	10,949	10,054
Skates and Rays		37,239	9,080	28,136	9,857	938	299	29,074	10,156	–	–	–	–	–	–	66,313	19,236	67,683	17,750
Unclassified kinds		2,522	436	67	8	10	–	77	8	–	–	–	–	–	–	2,599	444	2,300	369
Total		1,376,203	735,755	145,755	93,808	33,092	15,298	178,847	109,106	124,306	43,855	238,469	72,649	362,775	116,504	1,917,825	961,365	1,772,927	892.393
SHELL FISH.																			
Oysters	No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels	Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams	,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25	4	40	7
Lobsters	No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	263	12	339	3
Crabs	,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18,687	149	10,038	76
Unclassified	Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8	2	9	1
Total Value		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	167	–	87
TOTAL VALUE OF ALL FISH		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	961,532	–	892,580
Fish used for Manure		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*Continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Peterhead** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		46		5,558		5,604		2,407		6,902		9,309					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	199,760	67,474	469,062	148,707	668,822	216,181	668,822	216,181	566,807	129,256
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	1,007	196	1,769	325	2,776	521	2,776	521	1,789	239
Cod	–	–	404	179	961	475	1,365	654	–	–	753	462	753	462	2,118	1,116	8,050	4,045
Codling	–	–	–	–	6,080	3,447	6,080	447	–	–	–	–	–	–	6,080	3,447		
Ling	–	–	837	350	187	84	1,024	434	–	–	–	–	–	–	1,024	434	796	439
Torsk (Tusk)	–	–	90	19	16	3	106	22	–	–	–	–	–	–	106	22	85	30
Saithe (Coal Fish)	–	–	172	44	571	121	743	165	–	–	–	–	–	–	743	165	509	102
Haddocks, ex. Large	–	–	–	–	5,054	2,752	5,054	2,752	–	–	–	–	–	–	5,054	2,752	4,366	2,895
,, Large																		
,, Medium																		
,, Small																		
Whitings	–	–	–	–	1,221	411	1,221	411	–	–	–	–	–	–	1,221	411	654	260
Conger Eels	–	–	12	4	45	15	57	19	–	–	–	–	–	–	57	19	99	39
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	16	4	48	10	64	14	–	–	–	–	–	–	64	14	70	19
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	156	396	33	76	189	472	–	–	–	–	–	–	189	472	229	429
Lemon Soles	–	–	–	–	18	32	18	32	–	–	–	–	–	–	18	32	26	50
Flounders	–	–	–	–	189	97	189	97	–	–	–	–	–	–	189	97	153	71
Plaice, Large	–	–	–	–	362	392	362	392	–	–	–	–	–	–	362	392	122	122
,, Medium																		
,, Small																		
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	541	231	541	231	–	–	–	–	–	–	541	231	464	218
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	523	137	206	62	729	199	–	–	–	–	–	–	729	199	468	229
Unclassified kinds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Totals	–	–	2,210	1,133	15,532	8,208	17,742	9,341	200,767	67,670	471,584	149,494	672,351	217,164	690,093	226,505	584,687	138,443
SHELL FISH.																		
Oysters No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,504	120	2,557	126
Clams ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	436	22	185	13
Crabs ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	29,600	169	16,300	89
Unclassified Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	702	69	642	63
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	380	–	291
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	226,885	–	138,734
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	105	2	105	2	406	12
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	5,371	2,172	5,371	2,172	4,915	949

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Fraserburgh** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING, - -	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity. and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving - -	2		8		7,371		7,379		1,425		10,234		11,659					
Aggregate No. of Days absent from Port - - -	9		32		5,357		5,389		1,428		11,928		13,356					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt	£
Herrings - - - - -	–	–	–	–	–	–	–	–	130,405	39,262	573,046	179,532	703,451	218,794	703,451	218,794	596,031	140,956
Sprats - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel - - - - -	–	–	–	–	–	–	–	–	30	2	460	49	490	51	490	51	1,568	186
Cod - - - - -	6	2	44	15	1,340	448	1,384	463	–	–	–	–	–	–	1,390	465	11,492	4,204
Codling - - - - -	–	–	–	–	7,356	3,004	7,356	3,004	–	–	–	–	–	–	7,356	3,004		
Ling - - - - -	5	2	64	26	1,283	528	1,347	554	–	–	–	–	–	–	1,352	556	1,407	554
Torsk (Tusk) - - -	–	–	13	3	12	5	25	8	–	–	–	–	–	–	25	8	24	8
Saithe (Coal Fish) - -	–	–	11	3	566	123	577	126	–	–	–	–	–	–	577	126	963	225
Haddocks, ex. Large - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large - -	37	26	–	–	2,726	1,973	2,726	1,973	–	–	–	–	–	–	2,763	1,999	3,419	2,157
,, Medium - -	12	7	–	–	921	429	921	429	–	–	–	–	–	–	933	436	195	95
,, Small - - -	5	2	–	–	456	126	456	126	–	–	–	–	–	–	461	128	4	1
Whiting - - - -	.4	1	–	–	147	45	147	45	–	–	–	–	–	–	151	46	53	22
Conger Eels - - -	–	–	66	23	77	46	143	69	–	–	–	–	–	–	143	69	336	161
Gurnards - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	3	1	3	1	–	–	–	–	–	–	3	1	3	1
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	1	1	–	–	1	1	–	–	–	–	–	–	1	1	1	1
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	1	3	1	3	–	–	–	–	–	–	1	3	4	8
Halibut	–	–	10	21	106	225	116	246	–	–	–	–	–	–	116	246	179	384
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	6
Flounders	–	–	–	–	2	1	2	1	–	–	–	–	–	–	2	1	9	9
Plaice, Large	–	–	–	–	3	1	3	1	–	–	–	–	–	–	3	1	113	122
,, Medium	1	1	–	–	85	92	85	92	–	–	–	–	–	–	86	93	77	107
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	6	3	6	3	–	–	–	–	–	–	6	3	5	3
Witches	4	5	–	–	–	–	–	–	–	–	–	–	–	–	4	5	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	75	31	658	266	733	297	–	–	–	–	–	–	733	297	724	242
Unclassified Kinds	–	–	–	–	3	1	3	1	–	–	–	–	–	–	3	1	2	1
Totals	74	46	284	123	15,751	7,320	16,035	7,443	130,435	39,264	573,506	179,581	703,941	218,845	720,050	226,334	616,611	149,453
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,537	148	2,600	127
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	100,019	792	92,615	655
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	506	89	531	85
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,029	–	867
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	227,363	–	150,320
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

Return respecting Vessels arriving and Fish landed in the District of **Banff** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing,	Trawls.		Lines.						Nets.						1906. Grand Total Quantity and Value.		1905. Grand Total Quantity and Value.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.					
No. of Vessels arriving	–		6		7,068		7,074		33		2,241		2,274					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Falue.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	2,033	498	32,469	8,767	34,502	9,265	34,502	9,265	34,504	7,178
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	121	35	121	35	121	35	353	174
Cod	–	–	107	50	542	258	649	308	–	–	996	513	996	513	1,645	821	3,233	1,287
Codling	–	–	–	–	1,713	615	1,713	615	–	–	10	5	10	5	1,723	620		
Ling	–	–	108	56	16	11	124	67	–	–	–	–	–	–	124	67	183	91
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	5
Saithe (Coal Fish)	–	–	6	2	6	1	12	3	–	–	–	–	–	–	12	3	63	24
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	13,311	8,355
,, Large	–	–	–	–	8,410	5,950	8,410	5,950	–	–	–	–	–	–	8,410	5,950		
,, Medium	–	–	–	–	3,379	1,810	3,379	1,810	–	–	–	–	–	–	3,379	1,810		
,, Small	–	–	–	–	5,871	2,103	5,871	2,103	–	–	–	–	–	–	5,871	2,103		
Whiting	–	–	–	–	2,366	1,007	2,366	1,007	–	–	–	–	–	–	2,366	1,007	2,034	842
Conger Eels	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16	5
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	7	12	6	10	13	22	–	–	–	–	–	–	13	22	40	61
Lemon Soles	–	–	–	–	1	2	1	2	–	–	81	247	81	247	82	249	42	114
Flounders	–	–	–	–	5	2	5	2	–	–	–	–	–	–	5	2	10	5
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	27	12	27	12	–	–	–	–	–	–	27	12	15	9
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	43	17	13	7	56	24	–	–	35	13	35	13	91	37	151	41
Unclassified Kinds	–	–	–	–	46	9	46	9	–	–	–	–	–	–	46	9	65	14
Totals	–	–	271	137	22,401	11,797	22,672	11,934	2,033	498	33,712	9,580	35,745	10,078	58,417	22,012	54,030	18,205
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	600	30	1,000	50
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	61,900	375	34,400	187
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	405	–	237
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	22,417	–	18,442
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–								

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Buckie** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING	TRAWL.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		19		7,102		7,121		233		1,535		1,768					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	7,854	1,916	32,908	8,190	40,762	10,106	40,762	10,106	30,536	5,913
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	34	14	34	14	34	14	200	72
Cod	–	–	158	64	1,618	628	1,776	692	–	–	634	263	634	263	2,410	955	2,196	866
Codling	–	–	–	–	838	367	838	367	–	–	–	–	–	–	838	367	–	–
Ling	–	–	151	68	8	3	159	71	–	–	–	–	–	–	159	71	345	191
Torsk (Tusk)	–	–	3	1	–	–	3	1	–	–	–	–	–	–	3	1	9	3
Saithe (Coal Fish)	–	–	24	4	24	5	48	9	–	–	–	–	–	–	48	9	31	7
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large	–	–	–	–	12,363	9,030	12,363	9,030	–	–	122	129	122	129	12,485	9,159	13,194	9,606
,, Medium	–	–	–	–	648	272	648	272	–	–	–	–	–	–	648	272	–	–
,, Small	–	–	–	–	994	338	994	338	–	–	–	–	–	–	994	338	–	–
Whitings	–	–	–	–	194	61	194	61	–	–	–	–	–	–	194	61	214	48
Conger Eels	–	–	65	29	2	1	67	30	–	–	–	–	–	–	67	30	99	64
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	42	92	7	9	49	101	–	–	–	–	–	–	49	101	91	184
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Flounders	–	–	–	–	40	34	40	34	–	–	–	–	–	–	40	34	59	54
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
„ Medium	–	–	–	–	8	8	8	8	–	–	–	–	–	–	8	8	13	11
„ Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	541	155	9	3	550	158	–	–	–	–	–	–	550	158	487	155
Unclassified kinds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	99	34
Totals	–	–	984	413	16,753	10,759	17,737	11,172	7,854	1,916	33,698	8,596	41,552	10,512	59,289	21,684	47,573	17,208
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams „	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	100	5
Crabs „	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,500	38	34,600	86
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	31	7	247	40
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	45	–	131
TOTAL VALUE OF ALL FISH	–	–			–	–	–	–	–	–	–	–	–	–	–	21,729	–	17,339
Fish used for Manure	–	–	–		–	–	–	–	–	–	–	–	–	–		–	–	–
„ „ Bait (included above)	–	–	–		–	–	–	–	–	–	–	–	–	–				

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Findhorn** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING - -	TRAWL.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of vessels arriving - -	–		33		7,863		7,896		58		1,772		1,830					
Aggregate No. of Days absent from Port - - -	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings - - - -	–	–	–	–	–	–	–	–	3,780	986	32,797	7,229	36,577	8,215	36,577	8,215	25,040	4,731
Sprats - - - -	–	–	–	–	–	–	–	–	–	–	3,955	1,435	3,955	1,435	3,955	1,435	6,378	1,881
Sparlings - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel - - - -	–	–	–	–	–	–	–	–	–	–	11	12	11	12	11	12	30	13
Cod - - - Codling - - -	–	–	231	164	1,357	840	1,588	1,004	–	–	46	18	46	18	1,634	1,022	1,394	845
Ling - - -	–	–	242	157	21	16	263	173	–	–	–	–	–	–	263	173	250	161
Torsk (Tusk) - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	26	9
Saithe (Coal Fish) - -	–	–	71	17	25	8	96	25	–	–	–	–	–	–	96	25	36	9
Haddocks, ex. Large - ,, Large - ,, Medium - ,, Small -	–	–	–	–	13,861	8,746	13,861	8,746	–	–	–	–	–	–	13,861	8,746	8,702	6,461
Whitings - - - -	–	–	–	–	1,440	675	1,440	675	–	–	–	–	–	–	1,440	675	2,242	1,106
Conger Eels - - -	–	–	10	6	–	–	10	6	–	–	–	–	–	–	10	6	10	5
Gurnards - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	2
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	18	40	11	21	29	61	–	–	–	–	–	–	29	61	66	107
Lemon Soles	–	–	–	–	24	55	24	55	–	–	–	–	–	–	24	55	31	72
Flounders	–	–	–	–	1,236	1,083	1,236	1,083	–	–	–	–	–	–	1,236	1,083	1,518	1,230
Plaice, Large																		
,, Medium	–	–	–	–	27	22	27	22	–	–	–	–	–	–	27	22	–	–
,, Small																		
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	426	109	62	16	488	125	–	–	68	17	68	17	556	142	519	136
Unclassified kinds	–	–	–	–	16	5	16	5	–	–	–	–	–	–	16	5	30	10
Totals	–	–	998	493	18,080	11,487	19,078	11,980	3,780	986	36,877	8,711	40,657	9,697	59,735	21,677	46,277	16,778
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5,771	220	4,196	175
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	727	50
Crab - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	646	41	10,210	70
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	40	28	–	–
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	289	–	295
Total Value of all Fish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	21,966	–	17,073
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (Included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Cromarty** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING - -	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving - -	–		–		7,065		7,065		–		26		26					
Aggregate No. of Days absent from Port - - -	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value,	Quant'ty	Value,	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings - - - - -	–	–	–	–	–	–	–	–	–	–	222	45	222	45	222	45	626	123
Sprats - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	9
Cod - - -	–	–	–	–	2,724	1,138	2,724	1,138	–	–	–	–	–	–	2,724	1,138	3,264	1,454
Codling - - -																		
Ling - - - - -	–	–	–	–	4	2	4	2	–	–	–	–	–	–	4	2	59	31
Torsk (Tusk) - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish) - -	–	–	–	–	8	2	8	2	–	–	–	–	–	–	8	2	15	4
Haddocks, ex. Large -	–	–	–	–	10,036	5,593	10,036	5,593	–	–	–	–	–	–	10,036	5,593	8,201	4,903
,, Large -																		
,, Medium -																		
,, Small -																		
Whitings - - - -	–	–	–	–	167	83	167	83	–	–	–	–	–	–	167	83	263	148
Conger Eels - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Gurnards -			–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	11	3	11	3	–	–	–	–	–	–	11	3	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Flounders	–	–	–	–	296	151	296	151	–	–	–	–	–	–	296	151	413	207
Plaice, Large ,, Medium ,, Small	–	–	–	–	1,484	852	1,484	852	–	–	–	–	–	–	1,484	852	1,194	652
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	12	8	12	8	–	–	–	–	–	–	12	8	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	13	4	13	4	–	–	–	–	–	–	13	4	28	9
Unclassified Kinds	–	–	–	–	90	20	90	20	–	–	11	8	11	8	101	28	191	54
Totals	–	–	–	–	14,845	7,856	14,845	7,856	–	–	233	53	233	53	15,078	7,909	14,264	7,595
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5,222	246	9,964	348
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	600	29	1,122	51
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17,500	51	16,000	45
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5,700	894	5,263	853
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,220	–	1,297
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9,129	–	8,892
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	305	39	305	39	–	–	–	–	–	–	305	39	–	–

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Helmsdale** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING - -	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving - -	–		–		4,659		4,659		–		353		353					
Aggregate No. of Days absent from Port - - -	–		–		–		–		–		–							
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings - - - - -	–	–	–	–	–	–	–	–	–	–	2,814	734	2,814	734	2,814	734	665	217
Sprats - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel - - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cod - - - - -	–	–	–	–	1,203	409	1,203	409	–	–	–	–	–	–	1,203	409	3,901	1,268
Codling - - - - -	–	–	–	–	1,911	603	1,911	603	–	–	–	–	–	–	1,911	603		
Ling - - - - -	–	–	–	–	30	13	30	13	–	–	–	–	–	–	30	13	11	5
Torsk (Tusk) - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish) - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Haddocks, ex. Large - -	–	–	–	–	58	38	58	38	–	–	–	–	–	–	58	38	6,026	3,104
,, Large - -	–	–	–	–	1,954	1,059	1,954	1,059	–	–	–	–	–	–	1,954	1,059		
,, Medium - -	–	–	–	–	2,516	1,123	2,516	1,123	–	–	–	–	–	–	2,516	1,123		
,, Small - -	–	–	–	–	1,888	747	1,888	747	–	–	–	–	–	–	1,888	747		
Whitings - - - -	–	–	–	–	534	216	534	216	–	–	–	–	–	–	534	216	660	251
Conger Eels - - -	–	–	–	–	39	13	39	13	–	–	–	–	–	–	39	13	113	38
Gurnards - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	–	–	24	44	24	44	–	–	–	–	–	–	24	44	16	17
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Flounders	–	–	–	–	86	62	86	62	–	–	–	–	–	–	86	62	31	18
Plaice, Large	–	–	–	–	313	279	313	279	–	–	–	–	–	–	313	279	820	423
,, Medium	–	–	–	–	687	495	687	495	–	–	–	–	–	–	687	495		
,, Small	–	–	–	–	446	308	446	308	–	–	–	–	–	–	446	308		
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	7	2	7	2	–	–	–	–	–	–	7	2	20	7
Unclassified Kinds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Totals	–	–	–	–	11,696	5,411	11,696	5,411	–	–	2,814	734	2,814	734	14,510	6,145	12,264	5,349
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	700	35	1,400	70
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,620	157	4,136	236
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12,700	81	25,976	164
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	209	21	666	120
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–		–	294	–	590
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	6,439	–	5,939
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,400	70

APPENDIX B.—No. II.—*continued.*

Return respecting Vessels arriving and Fish landed in the District of **Lybster** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing	Trwls.		Lines.						Nets.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No of Vessels arriving	–		–		1,017		1,017		–		462		462					
Aggregate No. of Days absent from Port	–		–		–						–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	–	–	6,031	1,788	6,031	1,788	6,031	1,788	5,311	1,091
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cod																	10	8
Codling	–	–	–	–	2,000	558	2.000	558	–	–	–	–	–	–	2,000	558	1,802	454
Ling	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish)	–	–	–	–	32	4	32	4	–	–	–	–	–	–	32	4	57	7
Haddocks, ex. Large																		
,, Large																		
,, Medium	–	–	–	–	478	179	478	179	–	–	–	–	–	–	478	179	598	240
,, Small																		
Whitings	–	–	–	–	53	15	53	15	–	–	–	–	–	–	53	15	76	22
Conger Eels	–	–	–	–	21	11	21	11	–	–	–	–	–	–	21	11	61	36
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	–	–	8	15	8	15	–	–	–	–	–	–	8	15	8	16
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Flounders	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Plaice, Large ,, Medium ,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Unclassified Kinds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	56	7
Totals	–	–	–	–	2,592	782	2,592	782	–	–	6,031	1,788	6,031	1,788	8,623	2,570	7,979	1,881
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	766	40	950	47
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,180	39	8,720	55
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	79	–	102
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,649	–	1,983
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

Return respecting Vessels arriving and Fish landed in the District of **Wick** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing	Trawls.		Lines.						Nets.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		490		11,129		11,619		1,660		5,739		7,399					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	95,126	27,841	268,614	74,664	363,740	102,505	363,740	102,505	421 260	113,791
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	88	41	147	72	235	113	235	113	311	138
Cod Codling	–	–	5,161	1,972	17,844	6,514	23,005	8,486	–	–	–	–	–	–	23,005	8,486	31,059	9,663
Ling	–	–	645	244	438	182	1,083	426	–	–	–	–	–	–	1,083	426	1,383	495
Torsk (Tusk)	–	–	129	41	39	10	168	51	–	–	–	–	–	–	168	51	24	6
Saithe (Coal Fish)	–	–	673	112	1,657	315	2,330	427	–	–	–	–	–	–	2,330	427	3,207	448
Haddocks, ex. Large ,, Large ,, Medium ,, Small	–	–	–	–	6,287	1,999	6,287	1,999	–	–	–	–	–	–	6,287	1,999	5,242	1,772
Whitings	–	–	–	–	2	1	2	1	43	12	123	32	166	44	168	45	159	71
Conger Eels	–	–	166	99	281	143	447	242	–	–	–	–	–	–	447	242	290	135
Gurnards	–	–	–	–	175	41	175	41	–	–	–	–	–	–	175	41	151	39

Catfish	–	–	7	3	–	–	7	3	–	–	–	–	–	–	7	3	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	3
Halibut	–	–	174	371	263	498	437	869	–	–	–	–	–	–	437	869	264	467
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Flounders	–	–	–	–	1,487	470	1,487	470	–	–	–	–	–	–	1,487	470	1,976	581
Plaice, Large }	–	–	–	–	774	280	774	280	–	–	–	–	–	–	774	280	1,350	407
,, Medium }																		
,, Small }																		
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	7	4	7	4	–	–	–	–	–	–	7	4	70	29
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	1,531	488	707	265	2,238	753	–	–	–	–	–	–	2,238	753	1,186	415
Unclassified Kinds	–	–	–	–	8	2	8	2	–	–	–	–	–	–	8	2	7	2
Totals	–	–	8,486	3,330	29,969	10,724	38,455	14,054	95,257	27,894	268,884	74,768	364,141	102,662	402,596	116,716	467,940	128,462
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	46,995	2,684	51,850	2,961
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	252,641	2,400	267,211	2,417
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	211	38	338	63
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5,122	–	5,441
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	121,838	–	133,903
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	210	5	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	950	312	1,957	599

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Orkney** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	60		6		8,575		8,581		292		1,746		2,038					
Aggregate No. of Days absent from Port	1,120		12		8,575		8,587		318		2,067		2,385					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	25,975	9,065	102,118	31,031	128,093	40,096	128,093	40,096	149,442	32,144
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparklings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	100	16	600	90	700	106	700	106	–	–
Cod	29,522	10,916	228	92	10,116	3,863	10,344	3,955	–	–	–	–	–	–	39,866	14,871	42,746	17,683
Codling	–	–	–	–	9,889	3,960	9,889	3,960	–	–	–	–	–	–	9,889	3,960	–	–
Ling	10	3	180	89	56	20	236	109	–	–	–	–	–	–	246	112	192	67
Torsk (Tusk)	5	3	12	3	15	3	27	6	–	–	–	–	–	–	32	9	18	
Saithe (Coal Fish)	252	62	45	10	1,775	294	1,820	304	–	–	–	–	–	–	2,072	366	1,746	467
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	76	29	–	–	2,646	1,209	2,646	1,209	–	–	–	–	–	–	2,722	1,238	6,024	2,779
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Whitings	–	–	–	–	8	2	8	2	–	–	–	–	–	–	8	2	–	–
Conger Eels	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7	3
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	3	3	3	3	–	–	–	–	–	–	3	3	11	11
Halibut	–	–	38	57	99	117	137	174	–	–	–	–	–	–	137	174	161	227
Lemon Soles	–	–	–	–	2	2	2	2	–	–	–	–	–	–	2	2	–	–
Flounders	–	–	–	–	161	80	161	80	–	–	–	–	–	–	161	80	80	40
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–	–	–	5	4	5	4	–	–	–	–	–	–	5	4	11	7
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	97	48
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	100	23	141	37	241	60	–	–	–	–	–	–	241	60	143	35
Unclassified kinds	–	–	–	–	1,254	71	1,254	71	–	–	–	–	–	–	1 254	71	2,381	111
Totals	29,865	11,013	603	274	26,170	9,665	26,773	9,939	26,075	9,081	102,718	31,121	128,793	40,202	185,431	61,154	203,059	53,628
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Clams ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	161,277	9,089	156,043	8,749
Crabs ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12,300	58	9,300	42
Unclassified Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,371	202	1,600	258
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9,349	–	9,049
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	70,503	–	62,677
Fish used for Manure	–	–	–	–	960	16	960	16	–	–	–	–	–	–	960	16	2,144	59
,, ,, Bait (included above)	–	–	–	–	378	45	378	45	100	16	660	96	760	112	1,138	157	611	106

APPENDIX B.—(No. II.)—*continued.*

Return respecting Vessels arriving and Fish landed in the District of **Shetland** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing	Trawls.		Lines.						Nets.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	Cwt.
Herrings	–	–	–	–	–	–	–	–	801,064	336,012	805,194	265,382	1,606,258	601,394	1,606,258	601,394	2,260,420	576,645
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	65	23
Cod	–	–	272	76	24,926	9,272	25,198	9,348	–	–	–	–	–	–	25,198	9,348	19,053	6,374
Codling	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ling	–	–	644	237	2,301	700	2,945	937	–	–	–	–	–	–	2,945	937	8,319	2,472
Torsk (Tusk)	–	–	170	37	1,116	212	1,286	249	–	–	–	–	–	–	1,286	249	3,945	528
Saithe (Coal Fish)	–	–	106	14	4,477	472	4,583	486	–	–	–	–	–	–	4,583	486	15,375	1,579
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–	–	–	20,099	8,528	20,099	8,528	–	–	–	–	–	–	20,099	8,528	22,898	9,027
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Whitings	–	–	–	–	723	252	723	252	–	–	–	–	–	–	723	252	577	141
Conger Eels	–	–	2	1	–	–	2	1	–	–	–	–	–	–	2	1	–	–
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	5	1	5	1	–	–	–	–	–	–	5	1	10	2
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	3	1	3	1	–	–	–	–	–	–	3	1	30	9
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	132	172	929	830	1,061	1,002	–	–	–	–	–	–	1,061	1,002	1,466	1,097
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	2
Flounders	–	–	–	–	20	9	20	9	–	–	–	–	–	–	20	9	135	91
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
" Medium	–	–	–	–	30	26	30	26	–	–	–	–	–	–	30	26	9	6
" Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	63	23	63	23	–	–	–	–	–	–	63	23	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	355	58	384	68	739	126	–	–	–	–	–	–	739	126	1,836	230
Unclassified Kinds	–	–	–	–	955	113	955	113	–	–	–	–	–	–	955	113	356	43
Totals	–	–	1,631	595	56,031	20,507	57,712	21,102	801,064	336,012	805,194	265 382	1,606,258	601,394	1,663,970	622,496	2,334,497	598,269
SHELL FISH.																		
Oysters - - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	690	67	680	59
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	260	24	960	58
Crabs - - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18	9
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,173	227	1,267	247
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	318	–	373
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	622,814	–	598,642
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above).	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Stornoway** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	4		188		8,702		–		–		–		–					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	126,432	37,356	62,444	20,973	188,876	58,329	188,876	58,329	246,010	66,369
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	2,117	1,048	1,493	405	3,610	1,453	3,610	1,453	684	174
Cod	9	5	2,854	1,485	6,815	2,433	9,669	3,918	–	–	–	–	–	–	9,678	3,923	9,733	3,392
Codling	–	–	5	2	300	106	305	108	–	–	–	–	–	–	305	108	–	–
Ling	3	2	2,185	1,136	14,819	5,553	17,004	6,689	–	–	–	–	–	–	17,007	6,691	17,885	6,818
Torsk (Tusk)	–	–	184	51	1,253	264	1,437	315	–	–	–	–	–	–	1,437	315	1,993	425
Saithe (Coal Fish)	–	–	4,284	953	6,810	1,148	11,094	2,101	–	–	–	–	–	–	11 094	2,101	7,500	1,490
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large	46	25	–	–	–	–	–	–	–	–	–	–	–	–	46	25	9,286	3,602
,, Medium	–	–	–	–	12,412	4,999	12,412	4,999	–	–	–	–	–	–	12,412	4,999		
,, Small	–	–	–	–	71	19	71	19	–	–	–	–	–	–	71	19		
Whitings	6	2	–	–	883	334	883	334	–	–	–	–	–	–	889	336	885	294
Conger Eels	–	–	717	599	3,224	1,402	3,941	2,001	–	–	–	–	–	–	3,941	2,001	4,720	1,579
Gurnards	–	–	–	–	785	173	785	173	–	–	–	–	–	–	785	173	992	203

Catfish		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake		–	–	23	21	21	21	44	42	–	–	–	–	–	–	44	42	45	48
Squids		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot		2	6	–	–	121	55	121	55	–	–	–	–	–	–	123	61	105	61
Halibut		16	40	146	347	980	779	1,126	1,126	–	–	–	–	–	–	1,142	1,166	1,904	1,672
Lemon Soles		6	6	–	–	–	–	–	–	–	–	–	–	–	–	6	6	–	–
Flounders		–	–	–	–	1,596	595	1,596	595	–	–	–	–	–	–	1,596	595	1,583	580
Plaice, Large		28	39	–	–	–	–	–	–	–	–	–	–	–	–	28	39	–	–
,, Medium		10	15	–	–	–	–	–	–	–	–	–	–	–	–	10	15	–	–
,, Small		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches		5	6	–	–	–	–	–	–	–	–	–	–	–	–	5	6	–	–
Megrims		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays		21	10	1,517	669	8,808	1,388	10,325	2,057	–	–	–	–	–	–	10,346	2,067	11,739	1,964
Unclassified Kinds		–	–	–	–	2,261	575	2,261	575	–	–	–	–	–	–	2,261	575	1,722	431
Totals		152	156	11,915	5,263	61,159	19,844	73,074	25,107	128,549	38,404	63,937	21,378	192,486	59,782	265,712	85,045	316,786	89,102
SHELL FISH.																			
Oysters	No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,000	5	–	–
Mussels	Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	590	81	436	52
Clams	,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	1	–	–
Lobsters	No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	64,640	2,915	69,822	2,953
Crabs	,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	19,700	78	25,400	105
Unclassified	Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,008	149	979	146
Total Value		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,229	–	3,256
TOTAL VALUE OF ALL FISH		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	88,274	–	92,358
Fish used for Manure		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	1
,, ,, Bait (included above)		–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,022	1,217	3,098	761

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Barra** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–		–	–	–	–	-	36,505	21,782	122,413	49,486	158,918	71,268	158,918	71,268	84,714	48,373
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	21	2	4,582	714	4,603	716	4,603	716	4,184	999
Cod	–	–	30	6	1,177	243	1,207	249	–	–	–	–	–	–	1,207	249	1,639	328
Codling																		
Ling	–	–	15	7	1,258	425	1,273	432	–	–	–	–	–	–	1,273	432	2,224	700
Torsk (Tusk)	–	–	–	–	73	16	73	16	–	–	–	–	–	–	73	16	57	11
Saithe (Coal Fish)	–	–	36	3	2,388	250	2,424	253	–	–	–	–	–	–	2,424	253	1,893	246
Haddocks, ex. Large	–	–		–	20	10	20	10	–	–	–	–	–	–	20	10	493	107
,, Large																		
,, Medium																		
,, Small																		
Whitings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Conger Eels	–	–	–	–	280	97	280	97	–	–	–	–	–	–	280	97	311	101
Gurnards	–	-	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Monks (Anglers)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hake	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Squids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Turbot	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2
Halibut	—	—	12	6	73	71	85	77	—	—	—	—	—	—	85	77	90	76
Lemon Soles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Flounders	—	—	—	—	698	152	698	152	—	—	—	—	—	—	698	152	947	189
Plaice, Large ,, Medium ,, Small	—	—	—	—	163	60	163	60	—	—	—	—	—	—	163	60	424	99
Brill	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dabs	—	—	—	—	269	60	269	60	—	—	—	—	—	—	269	60	340	75
Witches	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Megrims	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Skates and Rays	—	—	—	—	305	65	305	65	—	—	—	—	—	—	305	65	397	54
Unclassified Kinds	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	—	—	93	22	6,704	1,449	6,797	1,471	36,526	21,784	126,995	0,200	163,521	71,984	170,318	73,455	97,714	51,360
SHELL FISH.																		
Oysters - No.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mussels - Cwts.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	57	5	34	4
Clams - ,,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lobsters - No.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	86,425	4,229	103,400	4,746
Crabs - ,,	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unclassified - Cwts.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5,642	1,492	9,081	1,969
Total Value	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5,726	—	6,719
TOTAL VALUE OF ALL FISH	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	79,181	—	58,079
Fish used for Manure	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
,, ,, Bait (included above)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

APPENDIX B.—No. II.—*continued.*

Return respecting Vessels arriving and Fish landed in the District of **Loch Broom** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing,	Trawls.		Lines.						Nets.						1906. Grand Total Quantity and Value.		1905. Grand Total Quantity and Value.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.					
No. of Vessels arriving	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	–	–	12,694	3,568	12,694	3,568	12,694	3,568	146,052	32,455
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	453	129	453	129	453	129	83	24
Cod Codling	–	–	–	–	6,158	2,244	6,158	2,244	–	–	–	–	–	–	6,158	2,244	6,890	1,941
Ling	–	–	–	–	1,204	521	1,204	521	–	–	–	–	–	–	1,204	521	1,857	610
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	30	7
Saithe (Coal Fish)	–	–	–	–	1,803	377	1,803	377	–	–	–	–	–	–	1,803	377	1,851	258
Haddocks, ex. Large " Large " Medium " Small	–	–	–	–	3,694	1,546	3,694	1,546	–	–	–	–	–	–	3,694	1,546	3,745	1,523
Whitings	–	–	–	–	721	294	721	294	–	–	–	–	–	–	721	294	427	146
Conger Eels	–	–	–	–	519	184	519	184	–	–	–	–	–	–	519	184	1,478	475
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	1

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	–	–	15	29	15	29	–	–	–	–	–	–	15	29	6	12
Lemon Soles	–	–	–	–	3	5	3	5	–	–	–	–	–	–	3	5	12	17
Flounders	–	–	–	–	189	136	189	136	–	–	–	–	–	–	189	136	139	81
Plaice, Large	–	–	–	–	12	14	12	14	–	–	–	–	–	–	12	14	49	48
,, Medium																		
,, Small																		
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	811	278	811	278	–	–	–	–	–	–	811	278	751	188
Unclassified Kinds	–	–	–	–	232	58	232	58	–	–	–	–	–	–	232	58	124	31
Totals	–	–	–	–	15,361	5,686	15,361	5,686	–	–	13,147	3,697	13,147	3,697	28,503	9,383	163,503	37,817
SHELL FISH.																		
Oysters No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,200	5
Mussels Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	666	80	549	61
Clams Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	93,550	3,947	75,619	3,500
Crabs No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18,550	81	24,200	74
Unclassified Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	768	203	853	212
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,311	–	3,852
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	13,694	–	41,669
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above.)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Lochcarron** and **Skye** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING, - -	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving - -	-		-		6,902		6,902		-		2,319		2,319					
Aggregate No. of Days absent from Port - - -	-		-		6,902		6,902		-		2,319		2,319					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings - - - -	-	-	-	-	-	-	-	-	-	-	4,286	1,392	4,286	1,392	4,286	1,392	8,680	2,275
Sprats - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sparlings - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mackerel - - - -	-	-	-	-	-	-	-	-	-	-	8,219	3,111	8,219	3,111	8,219	3,111	3,334	949
Cod - - - -	-	-	-	-	2,206	979	2,206	979	-	-	89	29	89	29	2,295	1,008	1,880	826
Codling - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ling - - - -	-	-	-	-	863	376	863	376	-	-	-	-	-	-	863	376	670	365
Torsk (Tusk) - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Saithe (Coal Fish) - -	-	-	-	-	768	164	768	164	-	-	2,518	397	2,518	397	3,286	561	2,398	447
Haddocks, ex. Large - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
,, Large - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
,, Medium - -	-	-	-	-	1,994	1,108	1,994	1,108	-	-	-	-	-	-	1,994	1,108	1,639	901
,, Small - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Whitings - - - -	-	-	-	-	453	240	453	240	-	-	-	-	-	-	453	240	490	243
Conger Eels - - -	-	-	-	-	1,084	553	1,084	553	-	-	-	-	-	-	1,084	553	1,331	542
Gurnards - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	20	4	20	4	20	4	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	3
Halibut	–	–	–	–	10	19	10	19	–	–	–	–	–	–	10	19	5	9
Lemon Soles	–	–	–	–	17	12	17	12	–	–	5	8	5	8	22	20	6	5
Flounders	–	–	–	–	167	114	167	114	–	–	4	2	4	2	171	116	158	106
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–	–	–	42	40	42	40	–	–	–	–	–	–	42	40	89	75
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	4	3	4	3	–	–	–	–	–	–	4	3	12	7
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	579	261	579	261	–	–	12	4	12	4	591	265	738	268
Unclassied Kinds	–	–	–	–	134	46	134	46	–	–	–	–	–	–	134	46	56	19
Totals	–	–	–	–	8,321	3,915	8,321	3,915	–	–	15,153	4 947	15,153	4,947	23,474	8,862	21,495	7,044
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	800	4	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	1	45	4
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	85,522	4,657	84,561	4,146
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	89,650	229	76,900	184
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,568	2,313	10,206	2,771
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,204	–	7,105
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	16,066	–	14,149
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

Return respecting Vessels arriving and Fish landed in the District of **Fort-William** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing	Trawls.		Lines.						Nets						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity lue.	
No. of Vessels arriving	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings,	–	–	–	–	–	–	–	–	138	34	1,746	468	1,884	502	1,884	502	6,440	1,612
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	5	2	199	90	204	92	204	92	367	149
Cod Codling	71	32	371	139	2,693	1,072	3,064	1,211	–	–	1,269	517	1,269	517	4,404	1,760	3,735	1,999
Ling	9	4	193	98	447	216	640	314	–	–	–	–	–	–	649	318	987	478
Torsk (Tusk)	–	–	2	1	–	–	2	1	–	–	–	–	–	–	2	1	–	–
Saithe (Coal Fish)	3	1	9	2	869	316	878	318	–	–	–	–	–	–	881	319	690	251
Haddocks, ex. Large ,, Large ,, Medium ,, Small	73	46	2	1	1,318	1,088	1,320	1,089	–	–	–	–	–	–	1,393	1,135	1,031	864
Whitings	2	1	–	–	310	279	310	279	–	–	–	–	–	–	312	280	426	400
Conger Eels	21	8	1,279	600	3,373	1,649	4,652	2,249	–	–	–	–	–	–	4,673	2,257	5,713	2,783
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17	9

Catfish - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers) - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	3
Hake - - - - -	–	–	–	–	7	5	7	5	–	–	–	–	–	–	7	5	522	233
Squids - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot - - - -	4	14	–	–	1	1	1	1	–	–	4	4	4	4	9	19	28	118
Halibut - - - -	–	–	24	38	32	37	56	75	–	–	–	–	–	–	56	75	40	94
Lemon Soles - - -	–	–	–	–	–	–	–	–	–	–	2	2	2	2	2	2	–	–
Flounders - - - -	–	–	–	–	284	234	284	234	–	–	6	6	6	6	290	240	395	319
Plaice, Large - -	13	23	–	–	9	10	9	10	–	–	5	5	5	5	27	38	257	406
,, Medium - -																		
,, Small - -																		
Brill - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12	9
Witches - - - -	27	29	–	–	–	–	–	–	–	–	4	4	4	4	31	33	1,404	1,377
Megrims - - - -	11	10	–	–	–	–	–	–	–	–	–	–	–	–	11	10	50	40
Skates and Rays - - -	133	39	1,752	649	3,958	1,337	5,710	1,986	–	–	–	–	–	–	5,843	2,025	4,308	1,203
Unclassified Kinds - -	–	–	–	–	61	18	61	18	–	–	–	–	–	–	61	18	7	6
Totals - -	367	207	3,632	1,528	13,362	6,262	16,994	7,790	143	36	3,235	1,096	3,378	1,132	20,739	9,129	26,438	12,353
SHELL FISH.																		
Oysters - - - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - - - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	376	29	76	5
Clams - - - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - - - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	52,808	2,157	55,009	2,360
Crabs - - - - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9,860	51	12,500	62
Unclassified - - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,940	1,023	4,039	1,049
Total Value - - - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3,260	–	3,476
TOTAL VALUE OF ALL FISH -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12,389	–	15,829
Fish used for Manure - -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait - - (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

Return respecting Vessels arriving and Fish landed in the District of **Campbeltown** during the Year 1906, and showing the catch and value during the previous Year.

Method of Fishing	Trawls.		Lines.						Nets.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port	–		–		–		–				–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	–	–	38,745	16,565	38,745	16,565	38,745	16,565	74,060	21,676
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	340	123	340	123	340	123	494	130
Cod	–	–	–	–	3,307	1,557	3,307	1,557	–	–	156	111	156	111	3,463	1,668	1,569	671
Codling	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Ling	–	–	–	–	179	85	179	85	–	–	–	–	–	–	179	85	61	26
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish)	–	–	–	–	1,637	268	1,637	268	–	–	254	47	254	47	1,891	315	1,577	305
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large	–	–	–	–	1,063	933	1,063	933	–	–	6	6	6	6	1,069	939	756	683
,, Medium	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Whitings	–	–	–	–	502	509	502	509	–	–	25	25	25	25	527	534	518	483
Conger Eels	–	–	–	–	108	58	108	58	–	–	–	–	–	–	108	58	46	24
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	8	4	8	4	8	4	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	1	2	1	2	–	–	–	–	2	4	2	4	3	6	1	2
Halibut	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	8
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	11	22
Flounders	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	117	103
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	–	–	–	–	344	384	344	384	–	–	–	–	130	258	130	258	474	642	640	834
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	8	8	8	8	–	–	–	–	–	–	–	–	8	8	5	5
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	416	108	416	108	–	–	–	–	–	–	–	–	416	108	94	25
Unclassified Kinds	–	–	–	–	18	9	18	9	–	–	–	–	–	–	–	–	18	9	12	4
Totals	–	–	–	–	7,583	3,921	7,583	3,921	–	–	39,666	17,143	39,666	17,143	47,249	21,064	79,966	25,001		
SHELL FISH.																				
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwt.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	744	82	366	37
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–		–	44,584	1,997	46,822	2,057
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–		–	900	5	384	3
Unclassified - Cwt.	–	–	–	–	–	–	–	–	–	–	–	–	–	–		–	2,164	611	2,700	658
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,695	–	2,755
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	23,759	–	27,756
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*Continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Inveraray** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port	–		–						–		–							
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–			–	–	–	–	–	18,403	5,907	18,403	5,907	18,403	5,907	16,352	7,525
Sprats	–	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–		–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	2,042	455	2,042	455	2,042	455	1,325	326
Cod	–	–	–		433	290	433	290	–	–	245	128	245	128	678	418	468	297
Codling																		
Ling	–	–	–		28	16	28	16	–	–	–	–	–	–	28	16	48	23
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish)	–	–	–	–	15	3	15	3	–	–	336	59	336	59	351	62	356	54
Haddocks, ex. Large	–	–	–		168	124	168	124	–	–	–	–	–		168	124	139	103
,, Large																		
,, Medium																		
,, Small																		
Whitings	–	–	–	–	123	89	123	89	–	–	–	–	–	–	123	89	84	62
Conger Eels	–	–	–	–	134	71	134	71	–	–	–	–	–	–	134	71	199	97
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Haliout	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lemon Soles	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Flounders	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Plaice, Large ,, Medium ,, Small	–	–	–	–	–	–	–	–	–	–	2	3	2	3	2	3	27	39
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays		–	–	–	86	17	86	17	–	–	–	–	–	–	86	17	89	18
Unclassified Kinds		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Totals	–	–	–	–	987	610	987	610	–	–	21,028	6,552	21,028	6,552	22,015	7,162	19,087	8,544
SHELL FISH.																
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12,400	65	12,600	64
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	40	8	40	9
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	1
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18,702	840	20,030	812
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,000	4	2,100	21
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	965	275	1,400	441
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,192	–	1,348
TOTAL VALUE OF ALL KINDS	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	8,354	–	9,892
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Rothesay** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Sailing.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	126	19	–	–	–	–	–	–	–	–	47,856	14,197	47,856	14,197	47,982	14,216	6,084	1,615
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	–	–	1,720	477	1,720	477	1,720	477	1,436	467
Cod	15	15	–	–	954	809	954	809	–	–	477	386	477	386	1 446	1,210	1,362	1,051
Codling																		
Ling	–	–	–	–	8	8	8	8	–	–	–	–	–	–	8	8	16	21
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish)	–	–	–	–	208	53	208	53	–	–	1,282	310	1 282	310	1,490	363	1,204	275
Haddocks, ex. Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	15	15	–	–	724	640	724	640	–	–	103	75	103	75	842	730	939	858
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Whitings	–	–	–	–	369	347	369	347	–	–	7	7	7	7	376	354	408	377
Conger Eels	–	–	–	–	113	58	113	58	–	–	16	7	16	7	129	65	81	39
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	16	16	16	16	16	16	50	44
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Halibut	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lemon Soles	–	–	–	–	–	–	–	–	–	–	3	3	3	3	3	3	–	–
Flounders	10	12	–	–	43	48	43	48	–	–	33	43	33	43	86	103	–	–
Plaice, Large	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, Medium	77	107	–	–	30	35	30	35	–	–	10	10	10	10	117	152	413	521
,, Small	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Witches	2	2	–	–	–	–	–	–	–	–	–	–	–	–	2	2	4	4
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	–	–	57	28	57	28	–	–	–	–	–	–	57	28	22	10
Unclassified Kinds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Totals	245	170	–	–	2,506	2,026	2,506	2,026	–	–	51,523	15,531	51,523	15,531	54.274	17,727	12,019	5,282
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,810	212	3,920	261
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,425	66	1,210	75
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,400	32	300	8
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,282	370	1,505	439
Total Value		–	–	–	–	–	–	–	–	–	–	–	–	–	–	680	–	783
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	18,407	–	6,065
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

APPENDIX B.—No. II.—*continued.*

RETURN respecting Vessels arriving and Fish landed in the District of **Greenock** during the Year 1906, and showing the catch and value during the previous year,

METHOD OF FISHING	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam and Sailing.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving -	-		-		-		-		-		-		-					
Aggregate No. of Days absent from Port			-		-		-		-		-		-					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	605	346	-	-	-	-	-	-		-	26,906	7,440	26,906	7,440	27,511	7,786	15,591	4,934
Sprats	-	-	-	-		-					-	-	-	-	-	-	-	-
Sparlings	-	-				-		-	-	-	-	-	-	-	-	-	-	-
Mackerel	-	-	-	-	-	-		-	-	-	811	246	811	246	811	246	652	288
Cod Codling	-	-	-		767	819	767	819	-	-	7	9	7	9	774	828	886	947
Ling	-	-	-	-	13	10	13	10	-		-	-	-	-	13	10	56	66
Torsk (Tusk)	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-
Saithe (Coal Fish)	120	30	-	-	206	88	206	88		-	37	14	37	14	363	132	184	99
Haddocks, ex. Large ,, Large ,, Medium ,, Small	-	-	-	-	369	432	369	432	-	-	14	19	14	19	383	451	668	790
Whitings	-	-		-	262	305	262	305	-	-	-	-	-	-	262	305	362	401
Conger Eels		-		-	174	101	174	101	-	-	-	-	-	-	174	101	68	8
Gurnards	-	-	-	-	-	-		-		-				-		-	-	

Catfish		-		-	-									-				
Monks (Anglers)	-	-	-	-				-	-					-				
Hake		-	-	-		-								-		-	3	3
Squids		-		-				-		-	-		-	-		-	-	
Turbot	-	-	-	-	-	-	-	-	-	-			-	-			-	
Halibut		-	-	-	-	-	-		-	-	-	-	-	-				-
Lemon Soles	-	-		-	..	..		-	-	-	-	-		-		-		.
Flounders	-	-		-	51	71	51	71	-			.	-	-	51	71	8	10
Plaice, Large	51	67	-	-	16	20	16	20		-		.	-	-	67	87		
,, Medium	268	320		-	100	120	100	120			13	13	13	13	381	453	879	1,010
,, Small	105	134	-	-	80	89	80	89			-	-	.	-	185	223		
Brill	-	-	-	-	-	-	-		-	-				-	-			
Dabs		-	-	-	1	1	1	1	-		-	-		-	1	1		
Witches	-	-						-					-				7	9
Megrims	-	-		.	-	-	-							-				
Skates and Rays		-		-	129	48	129	48	-	-				-	129	48	15	6
Unclassified Kinds	-	-			13	7	13	7		-			-	-	13	7	15	12
Totals	1,149	897	-	-	2,181	2,111	2,181	2,111	-	-	27,788	7,741	27,788	7,741	31,118	10,749	19,394	8,613
SHELL FISH.																		
Oysters - No.	-	-			-	-					-	-	-	-			-	
Mussels - Cwts.	-	-	-	-		-					-	-	.	-	35,447	1,718	12,646	878
Clams ,,		-	-			-		-			-	-		-			-	
Lobsters - No.		-	-		-	-					-				6,322	307	5,150	265
Crabs ,,	-	-		-	-			-								-	-	-
Unclassified - Cwts.			-	-	-			-	-		-		-	-	1,598	296	2,100	435
Total Value		-		-	-					-	.		-	-	-	2,321		1,578
TOTAL VALUE OF ALL FISH		-		-		-	-	-				.		-	-	13,070	-	10,191
Fish used for Manure	-		-	-	-	-		-	-			-			-			
,, ,, Bait (included above)		-		-		-	-	-		-		-		-				

APPENDIX B.—No. II.—*continued.*

Return respecting Vessels arriving and Fish landed in the District of **Ballantrae** during the Year 1906, and showing the catch and value during the previous Year.

METHOD OF FISHING	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
No. of Vessels arriving	–		–		–		–		–		–		–					
Aggregate No. of Days absent from Port	–		–		–		–		–		–		–					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	–	–	–	–	–	–	–	–	–	–	54,947	17,400	54,947	17,400	54,947	17,400	15,679	4,938
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings	–	–	–	–	–	–	–	–	–	–	41	128	41	128	41	128	50	194
Mackerel	–	–	–	–	–	–	–	–	–	–	1,870	649	1,870	649	1,870	649	1,113	423
Cod Codling	–	–	–	–	3,292	1,871	3,292	1,871	–	–	2,875	1,475	2,875	1,475	6,167	3,346	5,932	3,225
Ling	–	–	–	–	391	185	391	185	–	–	–	–	–	–	391	185	144	82
Torsk (Tusk)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Saithe (Coal Fish)	–	–	–	–	393	116	393	116	–	–	1,414	430	1,414	430	1,807	546	1,684	489
Haddocks, ex. Large ,, Large ,, Medium ,, Small	–	–	–	–	1,614	1,364	1,614	1,364	–	–	–	–	–	–	1,614	1,364	1,102	887
Whitings	–	–	–	–	1,896	1,575	1,896	1,575	–	–	–	–	–	–	1,896	1,575	2,651	2,093
Conger Eels	–	–	–	–	1,145	553	1,145	553	–	–	78	155	78	155	1,223	708	1,038	535
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	–	–	–	–	–	–	–	–	–	–	97	226	97	226	97	226	110	249
Halibut	–	–	–	–	12	25	12	25	–	–	–	–	–	–	12	25	1	2
Lemon Soles	–	–	–	–	1	4	1	4	–	–	–	–	–	–	1	4	5	22
Flounders	416	418	–	–	–	–	–	–	–	–	364	208	364	208	780	626	2,177	1,955
Plaice, Large																		
,, Medium	860	951		–	312	332	312	332	–	–	1,194	1,219	1,194	1,219	2,366	2,502	2,355	2,192
,, Small																		
Brill	–	–	–	–	2	3	2	3	–	–	7	9	7	9	9	12	12	16
Dabs	–	–	–	–	4	2	4	2	–	–	2	2	2	2	6	4	17	17
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	317	115	–	–	1,637	585	1,637	585	–	–	289	80	289	80	2,243	780	1,941	637
Unclassified Kinds	–	–	–	–	12	3	12	3	–	–	–	–	–	–	12	3	154	88
Totals	1,593	1,484	–	–	10,711	6,618	10,711	6,618	–	–	63,178	21,981	63,178	21,981	75,482	30,083	36,165	18,014
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	373,450	1,494	18,950	749
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,527	828	6,233	624
Clams ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	22,728	888	29,433	922
Crabs ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	28,944	151	36,425	181
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	4,287	4,018	4,842	3,895
Total Value	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,379		6,371
TOTAL VALUE OF ALL FISH	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	37,462		24,415
Fish used for Manure	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		
,, ,, Bait (included above)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		

APPENDIX B.—No. II.—*continued*.

FISH LANDED.—Statement of the Total Quantity and Value of the different kinds of White and Shell Fish landed in the **East Coast** Districts of Scotland in the Year 1906.

KINDS OF FISH.	TRAWLS.		LINES.						NETS.						1906.		1905.	
			Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.		Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	456	239	–	–	–	–	–	–	575,063	185,522	2,115,732	624,979	2,690,795	810,501	2,691,251	810,740	2,313,253	542,519
Sprats	–	–	–	–	–	–	–	–	–	–	5,532	1,994	5,532	1,994	5,532	1,994	12,130	2,840
Sparlings	–	–	–	–	–	–	–	–	–	–	230	411	230	411	230	411	527	757
Mackerel	1,033	664	–	–	–	–	–	–	1,426	370	3,538	891	4,964	1,261	5,997	1,925	6,004	1,598
Cod and Codling	462,476	202,163	52,047	31,269	90,230	41,866	142,277	73,135	–	–	3,990	1,874	3,990	1,874	608,743	277,172	581,037	259,857
Ling	59,788	16,916	43,368	15,342	3,495	1,926	46,863	17,268	–	–	–		–	–	106,651	34,184	118,478	35,889
Torsk (Tusk)	1,842	500	6,234	1,714	68	18	6,302	1,732	–	–		–	–	–	8,144	2,232	10,137	2,643
Saithe (Coal Fish)	73,352	14,708	5,652	1,181	4,316	963	9,968	2,144	–	–	–	–	–	–	83,320	16,852	92,759	17,187
Haddocks	868,137	409,128	114	46	159,615	90,395	159,729	90,441	–	–	122	129	122	129	1,027,988	499,698	882,964	506,826
Whitings	119,995	42,282	–	–	21,166	10,857	21,166	10,857	43	12	123	32	166	44	141,327	53,183	177,651	64,440
Conger Eels	299	88	2,066	1,092	667	371	2,733	1,463	–	–	–	–		–	3,032	1,551	3,433	1,668
Gurnards	6,942	1,041	–	–	175	41	175	41	–	–	–	–		–	7,117	1,082	7,529	1,284
Catfish	20,196	5,929	97	23	375	196	472	219	–	–	–			–	20,668	6,148	18,316	4,987
Monks (Anglers)	14,920	2,766	–	–	–	–		–	–	–	–		–	–	14,920	2,766	13,479	2,599
Hake	25,130	15,960	147	74	–	–	147	74	–	–	–	–	–	–	25,277	16,034	33,570	16,258
Squids	2,758	1,938	–	–	–	–	–	–	–	–	–	–	–	–	2,758	1,938	1,993	1,380
Turbot	5,459	17,865	–	–	5	17	5	17	–	–	–	–	–	–	5,464	17,882	6,218	20,867

Halibut - - -	12,679	22,046	20,836	39,923	653	1,260	21,489	41,183	-	-	-	-	-	-	34,168	63,229	31,885	55,289
Lemon Soles - -	32,568	65,172	-	-	140	261	140	261	-	-	81	247	81	247	32,789	65,680	30,813	55,311
Flounders - - -	5,143	5,279	-	-	4,193	2,521	4,193	2,521	-	-	1,575	1,368	1,575	1,368	10,911	9,168	11,567	9,467
Plaice - - -	47,539	70,494			6,218	4,425	6,218	4,425	-		1,164	1,034	1,164	1,034	54,921	75,953	51,096	71,831
Brill - - - -	1,029	1,654	-	-	-	-	-	-	-			-		-	1,029	1,654	1,004	1,569
Dabs - - - -	3,802	1,354	-		2,31	1,270	2,314	1,270	-	-	11	5	11	5	6,127	2,629	6.138	2,549
Witches - - -	16,669	23,840		-	-	-			-		-	-		-	16,669	23,840	21,242	22,421
Megrims - - -	10,697	10,364	-	-	-	-			-		-			-	10,697	10,364	11,610	10,491
Skates and Rays - -	40,707	9,997	31,567	10,958	3,059	1,171	34,626	12,129	-	-	235	102	235	102	75,568	22,228	78,043	20,942
Unclassified - -	3,530	694	67	8	173	37	240	45	-	-	11	8	11	8	3,781	747	3,311	622
Total for 1906 -	1,837,146	943,081	162,195	101,630	296,862	157,595	459,057	259,225	576,532	185,904	2,132,344	633,074	2,708,876	818,978	5,005,079	2,021.284		
Total for 1905 -	1,717,408	933,975	*	*	*	*	478,865	252,402	*	*	*	*	2,331,914	547,714	4,526,187	1,734,091	4,526,187	1,734,091
Increase in 1906 -	119,738	9,106	-	-	-	-	-	6,823			-		376,962	271,264	478.892	287,193		
Decrease in 1906 -	-	-	-	-	-	-	17,808	-	-	-	-	-	-	-			-	
SHELL FISH.																		
Oysters - No.			-	-	-	-			-	-			-	-	-	-	14,700	47
Mussels - Cwts.		-	-	-	-	-			-	-				-	79,529	4,111	77,902	4,071
Clams ,,	-		-		-	-	-		-	-			-	-	7,381	1.082	7,843	1,128
Lobsters - No.	-				-	-			-	-			-	-	93,319	4,841	112,299	5,674
Crabs - ,,	-		-		-	-		-	-		-			-	1,909,353	12,493	1,801,022	10,986
Unclasssfied - -		-	-	-	-	-			-	-	-	-		-	13,228	2,131	12,648	2,091
Total for 1906 -				-	-	-			-			-	-	-	-	24,658		
Total for 1905 -	-		-	-		-			-	-		-	-			23,997		23,997
Increase in 1906 -	-	-		-	-	-	-	-	-	-		-	-	-		661	-	-

Total Value of Fish and Shell Fish for 1906, £2,045,942
Do. do. do. 1905, £1,758,088

Increase in 1906, £287,854

* Not given previously.

APPENDIX B.—No. II.—*continued.*

FISH LANDED.—Statement of the Total Quantity and Value of the different kinds of White and Shell Fish landed in **Orkney and Shetland** in the Year 1906.

	TRAWLS.		LINES.						NETS.						1906. Grand Total Quantity and Value.		1905. Grand Total Quantity and Value.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quantt'y	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herring	–	–	–	–	–	–	–	–	827,039	345,077	907,312	296,413	1,734,351	641,490	1,734,351	641,490	2,409,862	608,789
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparling	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mackerel	–	–	–	–	–	–	–	–	100	16	600	90	700	106	700	106	65	23
Cod	29,522	10,916	500	168	44,931	17,095	45,431	17,263	–	–	–	–	–	–	74,953	28,179	61,799	24,057
Ling	10	3	824	326	2,357	720	3,181	1,046	–	–	–	–	–	–	3,191	1,049	8,511	2,539
Tusk	5	3	182	40	1,131	215	1,313	255	–	–	–	–	–	–	1,318	258	3,963	534
Saithe	252	62	151	24	6,252	766	6,403	790	–	–	–	–	–	–	6,655	852	17,121	2,046
Haddock	76	29	–	–	22,745	9,737	22,745	9,737	–	–	–	–	–	–	22,821	9,766	28,922	11,806
Whiting	–	–	–	–	731	254	731	254	–	–	–	–	–	–	731	254	577	141
Conger Eels	–	–	2	1	–	–	2	1	–	–	–	–	–	–	2	1	7	3
Gurnards	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Catfish	–	–	–	–	5	1	5	1	–	–	–	–	–	–	5	1	10	2
Monks	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hake	–	–	–	–	3	1	3	1	–	–	–	–	–	–	3	1	30	9
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Turbot	–	–	–	–	3	3	3	3	–	–	–	–	–	–	3	3	11	11
Halibut	–		170	229	1,028	947	1,198	1,176	–	–	–	–	–	–	1,198	1,176	1,627	1,324
Lemon Soles	–	–	–	–	2	2	2	2	–	–	–	–	–	–	2	2	3	2
Flounders	–	–	–	–	181	89	181	89	–	–	–	–	–	–	181	89	215	131
Plaice	–	–	–	–	35	30	35	30	–	–	–	–	–	–	35	30	20	13
Brill	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Dabs	–	–	–	–	63	23	63	23	–	–	–	–	–	–	63	23	97	48
Witches	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Megrims	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Skates and Rays	–	–	455	81	525	105	980	186	–	–	–	–	–	–	980	186	1,979	265
Unclassified Kinds	–	–	–	–	2,209	184	2,209	184	–	–	–	–	–	–	2,209	184	2,737	154
1906 Total	29,865	11,013	2,284	869	82,201	30,172	84,485	31,041	827,139	345,093	907,912	296,503	1,735,051	641,596	1,849,401	683,650	–	–
1905 Total	21,139	8,079	*–	*–	*–	*–	106,490	35,006	*–	*–	*–	*–	2,409,927	608,812	2,537,566	651,897	2,537,556	651,897
Increase in 1906	8,726	2,934	–	–	–	–	–	–	–	–	–	–	–	32,784	–	31,753	–	–
Decrease in 1906	–	–	–	–	–	–	22,005	3,965	–	–	–	–	674,876	–	688,155	–	–	–
SHELL FISH.																		
Oysters - No.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mussels - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	690	67	680	59
Clams - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–		–	161,537	9,113	157,003	8,807
Crabs - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	12,300	58	11,100	51
Unclassified Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,544	429	2,867	505
Total for 1906	–	–	–	–	–	–	–		–	–	–	–	–	–	–	9,667	–	–
Total for 1905	–	–	–	–	–	–	–		–	–	–	–	–	–	–	9,422	–	9,422
Increase in 1906	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	245	–	–

Total Value of Fish and Shell Fish in 1906, £693,317
Do. do. do. 1905, £661,319

Increase in 1906, £31,998

* Not given previously.

APPENDIX B.—No. II.—*Continued.*

FISH LANDED.—Statement of the Total Quantity and Value of the different kinds of White and Shell Fish landed in the **West Coast** Districts of Scotland in the Year 1906.

KINDS OF FISH.	TRAWLS.		LINES.						NETS.						1906. Grand Total Quantity and Value.		1905. Grand Total Quantity and Value.	
			Steam.		Sailing.		Total.		Steam.		Sailing.		Total.					
	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.		Cwt.		Cwt.	£	Cwt.	£	Cwt.	£
Herrings	731	365	–	–	–	–	–	–	163,075	59,172	390,440	137,396	553,515	196,568	554,246	196,933	619,662	191,772
Sprats	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Sparlings		–	–	–		–	–	–	–	–	41	128	41	128	41	128	50	194
Mackerel	–	–	–	–		–	–	–	2,143	1,052	21,729	6,399	23,872	7,451	23,872	7,451	13,672	3,929
Cod and Codling	95	52	3,260	1,632	28,102	12,423	31,362	14,055	–	–	5,118	2,655	5,118	2,655	36,575	16,762	34,094	14,677
Ling	12	6	2,393	1,241	19,210	7,395	21,603	8,636	–	–	–	–	–	–	21,615	8,642	23,948	9,189
Torsk (Tusk)	–	–	186	52	1,326	280	1,512	332	–	–	–	–	–	–	1,512	332	2,080	443
Saithe (Coal Fish)	123	31	4,329	958	15,097	2,783	19,426	3,741	–	–	5,841	1,257	5,841	1,257	25,390	5 029	19,337	3,914
Haddocks	134	86	2	1	23,447	12,263	23,449	12,264	–	–	123	100	123	100	23,706	12,450	19,798	10,318
Whitings	8	3	–	–	5,519	3,972	5,519	3,972	–	–	32	32	32	32	5,559	4,007	6,251	4,499
Conger Eels	21	8	1,996	1,199	10,154	4,726	12,150	5,925	–	–	94	162	94	162	12,265	6,095	14,985	6,213
Gurnards	–	–	–	–	785	173	785	173	–	–	–	–	–	–	785	173	1,026	217
Catfish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Monks (Anglers)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	9	3
Hake	–	–	23	21	28	26	51	47	–	–	44	24	44	24	95	71	620	328
Squids	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Turbot	6	20	–	–	123	58	123	58	–	–	103	234	103	234	232	312	246	435

Turbot - - -	6	20	-	-	123	58	123	58	-	-	103	234	103	234	282	312	246	435
Halibut - - -	16	40	182	391	1,122	960	1,304	1,351	-	-	-	-	-	-	1,320	1,391	2,051	1,873
Lemon Soles - -	6	6	-	-	21	21	21	21	-	-	10	13	10	13	37	40	34	66
Flounders - - -	426	430	-	-	3,028	1,350	3,028	1,350	-	-	407	259	407	259	3,861	2,039	5,524	3,343
Plaice - - -	1,412	1,656	-	-	1,108	1,104	1,108	1,104	-	-	1,354	1,508	1,354	1,508	3,874	4,268	5,133	5,224
Brill - - - -	-	-	-	-	2	3	2	3	-	-	7	9	7	9	9	12	12	16
Dabs - - - -	-	-	-	-	286	74	286	74	-	-	2	2	2	2	288	6	386	113
Witches - - -	34	37	-	-	-	-					4	4	4	4	38	41	1,415	1,390
Megrims - - -	11	10	-	-	-	-	-		-			-			11	10	50	40
Skates and Rays - -	471	164	3,269	1,318	16,786	4,115	20,055	5,433	-	-	301	84	301	84	20,827	5,681	20,094	4,373
Unclassified - -	-	-	-	-	2,731	716	2,731	716	-	-	-	-	-	-	2,731	716	2,090	591
Total for 1906 -	3,506	2,914	15,640	6,813	128,875	52,442	144,515	59,255	165,218	60,224	425,650	150,266	590,868	210,490	738,889	272,659	-	-
Total for 1905 -	6,884	6,063	*	*	*	*	152,299	61,202	*	*	*	*	633,384	195,895	792,567	263,160	792,567	263,160
Increase in 1906 -	-	-	-	-	-	-	-	-	-	-		-	-	14,595		9,499	-	-
Decrease in 1906 -	3,378	3,149	-	-	-	-	7,784	1,947	-	-	-	-	42,516	-	53,678	-	-	-
SHELL FISH.																		
Oysters - No.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	389,650	1,568	203,300	818
Mussels - Cwts.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48,267	3,044	24,345	1,935
Clams - ,,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1	5	1
Lobsters - No.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	476,706	22,003	491,056	21,836
Crabs - ,,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	169,954	631	178,209	638
Unclassified - Cwts.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,822	10,750	37,705	12,015
Total for 1906 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37,997	-	-
Total for 1905 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37,243	-	37,243
Increase in 1906 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	754	-	-

Total Value of Fish and Shell Fish for 1906, £310,656
Do. do. do. 1905, £300,403

Increase in 1906, £10,253

* Not given previously.

APPENDIX B.—No. II.—*continued.*

FISH LANDED.—Statement of the Total Quantity and Value of the different kinds of White and Shell Fish landed in **Scotland** in the Year 1906.

KINDS OF FISH.	TRAWLS.		LINES.						NETS.						1906.		1905.	
	Steam.		Steam.		Sailing.		Total.		Steam.		Sailing.		Total.		Grand Total Quantity and Value.		Grand Total Quantity and Value.	
	Quant'ty	Value.	Quant'ty	Value	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.	Quant'ty	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings - -	1,187	604	–	–	–	–	–	–	1,565,177	589,771	3,413,484	1,058,788	4,978,661	1,648,559	4,979,848	1,649,163	5,342,777	1,343,080
Sprats - - -	–	–	–	–	–	–	–	–	–	–	5,532	1,994	5,532	1,994	5,532	1,994	12,130	2,840
Sparlings - -	–	–	–	–	–	–	–	–	–	–	271	539	271	539	271	539	577	951
Mackerel - -	1,033	664	–	–	–	–	–	–	3,669	1,438	25,867	7,380	29,536	8,818	30,569	9,482	19,741	5,550
Cod - - -	492,093	213,131	55,807	33,069	163,263	71,384	219,070	104,453	–	–	9,108	4,529	9,108	4,529	720,271	322,113	676,930	298,591
Ling - - -	59,810	16,925	46,585	16,909	25,062	10,041	71,647	26,950	–	–	–	–	–	–	131,457	43,875	150,937	47,617
Tusk - - -	1,847	503	6,602	1,806	2,525	513	9,127	2,319	–	–	–	–	–	–	10,974	2,822	16,180	3,620
Saithe - - -	73,727	14,801	10,132	2,163	25,665	4,512	35,797	6,675	–	–	5,841	1,257	5,841	1,257	115,365	22,733	129,217	23,147
Haddocks - -	868,347	409,243	116	47	205,807	112,395	205,923	112,442	–	–	245	229	245	229	1,074,515	521,914	931,684	528,950
Whitings - -	120,003	42,285	–	–	27,416	15,083	27,416	15,083	43	12	155	64	198	76	147,617	57,444	184,479	69,080
Conger Eels - -	320	96	4,064	2,292	10,821	5,097	14,885	7,389	–	–	94	162	94	162	15,299	7,647	18,425	7,884
Gurnards - -	6,942	1,041	–	–	960	214	960	214	–	–	–	–	–	–	7,902	1,255	8,555	1,501
Catfish - - -	20,196	5,929	97	23	380	197	477	220	–	–	–	–	–	–	20,673	6,149	18,326	4,989
Monks (Anglers) -	14,920	2,766	–	–	–	–	–	–	–	–	–	–	–	–	14,920	2,766	13,488	2,602
Hake - - -	25,130	15,960	170	95	31	27	201	122	–	–	44	24	44	24	25,375	16,106	34,220	16,595
Squids - - -	2,758	1,938	–	–	–	–	–	–	–	–	–	–	–	–	2,758	1,938	1,993	1,380
Turbot - -	5,465	17,885	–	–	131	78	131	78	–	–	103	234	103	234	5,699	18,197	6,475	21,313
Halibut - -	12,695	22,086	21,188	40,543	2,803	3,167	23,991	43,710	–	–	–	–	–	–	36,686	65,796	35,563	58,486

Lemon Soles - -	32,574	65,178	–	–	163	284	163	284	–	–	91	260	91	260	32,828	65,722	30,850	55,379
Flounders - -	5,569	5,709	–	–	7,402	3,960	7,402	3,960	–	–	1,982	1,627	1,982	1,627	14,953	11,296	17,306	12,941
Plaice - - -	48,951	72,150	–	–	7,361	5,559	7,361	5,559	–	–	2,518	2,542	2,518	2,542	58,830	80,251	56,249	77,068
Brill - - -	1,029	1,654	–	–	2	3	2	3	–	–	7	9	7	9	1,038	1,666	1,016	1,585
Dabs - - -	3,802	1,354	–	–	2,663	1,367	2,663	1,367	–	–	13	7	13	7	6,478	2,728	6,621	2,710
Witches - -	16,703	23,877	–	–	–	–	–	–	–	–	4	4	4	4	16,707	23,881	22,657	23,811
Megrims - -	10,708	10,374	–	–	–	–	–	–	–	–	–	–	–	–	10,708	10,374	11,660	10,531
Skate and Rays -	41,178	10,161	35,291	12,357	20,370	5,391	55,661	17,748	–	–	536	186	536	186	97,375	28,095	100,116	25,580
Unclassified Kinds -	3,530	694	67	8	5,113	937	5,180	945	–	–	11	8	11	8	8,721	1,647	8,138	1,367
Total Year 1906 -	1,870,517	957,008	180,119	109,312	507,938	240,209	688,057	349,521	1,568,889	591,221	3,465,906	1,079,843	5,034,795	1,671,064	7,593,369	2,977,593	–	–
Total Year 1905 -	1,745,431	948,117	*	*	*	*	735,654	348,610	*	*	*	*	5,375,225	1,352,421	7,856,310	2,649,148	7,856,310	2,649,148
Increase in 1906 -	125,086	8,891	–	–	–	–	–	911	–	–	–	–	–	318,643	–	328,445	–	–
Decrease in 1906 -	–	–	–	–	–	–	47,597	–	–	–	–	–	340,430	–	262,941	–	–	–
SHELL FISH.																		
Oysters - No.	–		–	–		–	–	–	–	–	–	–	–	–	389,650	1,568	2180·00	865
Mussels - Cwts.	–	–		–	–		–	–	–	–	–	–	–	–	128,486	7,222	102,927	6,065
Clams - - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	7,391	1,083	7,848	1,129
Lobsters - No.	–	–	–	–	–	–	–	–	–	–	–	–		–	731,562	35,957	760,358	36,317
Crabs - - ,,	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2,091,607	13,182	1,990,331	11,675
Unclassified - Cwts.	–	–	–	–	–	–	–	–	–	–	–	–	–	–	45,594	13,310	53,220	14.611
Total for 1906 -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	72,322	–	70,662
Total for 1905 -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	70,662	–	–
Increase in 1906 -	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1,660	–	–

Grand Total Value of Fish and Shell Fish for 1906, £3,049,915
Do. do. do. 1905, £2,719,810

Increase in 1906, £330,105

* Not given previously.

APPENDIX

FISH USED IN A FRESH STATE.—STATEMENT showing the Total Quantity consumed Fresh in the Localities

No.	DISTRICTS.	Herrings.		Sprats.		Sparlings.		Mackerel.	
	EAST COAST.	Cwts.	£	Cwts.	£	Cwts	£	Cwts.	£
1	Eyemouth, . . .	36,636	11,832	...	...	...	...	232	85
2	Leith, ...	24,530	8,400	1,332	513	98	140	87	39
3	Anstruther, . . .	125,939	44,190	...	...	121	242	...	...
4	Montrose, . . .	7,066	2,208	245	46	11	29	232	86
5	Stonehaven, ...	7,406	2,116	...	...	...	...	...	...
6	Aberdeen, . . .	33,922	2,115	...	...	...	...	1,629	886
7	Peterhead, . . .	35,538	1,201	...	...	...	...	2,776	521
8	Fraserburgh, . .	13,955	3,186	...	...	...	...	490	51
9	Banff, ...	4,022	4,045	...	...	...	...	121	35
10	Buckie, . . .	7,709	21,345	...	...	...	...	34	14
11	Findhorn, . . .	7,577	1,737	1,253	444	...	...	11	12
12	Cromarty, . . .	222	45	...	...	...	...	...	...
13	Helmsdale, . . .	1,498	432	...	...	...	...	...	...
14	Lybster, . . .	344	123	...	...	...	...	...	...
15	Wick, ...	15,864	5,643	...	...	...	...	235	113
	East Coast Totals carried down, . .	322,228	109,618	2,830	1,003	230	411	5,847	1,842
	Orkney and Shetland.								
16	Orkney, . . .	588	225	...	...	...	...	700	106
17	Shetland, . . .	1,207	372	...	...	...	...	...	...
	Orkney and Shetland Totals carried down,	1,795	597	...	...	...	...	700	106
	WEST COAST.								
18	Stornoway, . . .	36,498	11,454	...	...	...	...	2,905	1,349
19	Barra, ...	1,994	683	...	...	...	...	794	122
20	Loch Broom, . .	7,609	2,007	...	...	...	...	453	129
21	Loch Carron and Skye,	3,048	983	...	...	...	...	7,872	3,064
22	Fort-William, . .	1,240	378	...	...	...	...	204	92
23	Campbeltown, . .	37,888	16,365	...	...	...	...	340	123
24	Inveraray, . . .	13,800	4,554	...	...	...	...	2,042	455
25	Rothesay, . . .	46,103	13,743	...	...	...	...	1,720	477
26	Greenock, . . .	27,511	7,786	...	...	...	...	814	248
27	Ballantrae, . . .	54,747	17,340	...	...	41	128	1,870	649
	West Coast Totals carried down, . .	230,438	75,293	...	...	41	128	19,014	6,708
	Totals brought down.								
	East Coast, . . .	322,228	109,618	2,830	1,003	230	411	5,847	1,842
	Orkney and Shetland,	1,795	597	...	...	...	...	700	106
	West Coast, . .	230,438	75,293	...	...	41	128	19,014	6,708
	Grand Totals for 1906,	554,461	185,508	2,830	1,003	271	539	25,561	8,656
	Grand Totals for 1905,	551,720	144,035	6,382	1,147	577	951	15,555	4,553
	Increase in 1906, . .	2,741	41 473	...	...	...	...	10,006	4,103
	Decrease in 1906, . .	...	...	3,552	144	306	412	...	...

C.

and Value of all Fish landed and sold for use in a Fresh State, or where taken, in the Year 1906.

Cod and Codlings.		Ling.		Torsk (Tusk).		Saithe (Coal Fish).		Haddocks.		Whitings.		No.
Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	
1,656	929	234	245	...	...	66	13	828	724	1,517	1,456	1
83,413	40,484	4,592	2,285	5	2	3,929	863	219,097	78,630	33,262	9,678	2
9,645	5,419	265	219	...	...	454	151	11,096	7,689	343	135	3
23,742	12,073	830	683	2	2	359	140	77,982	28,895	8,179	3,341	4
3,897	1,732	58	33	...	...	80	23	3,920	1,712	1,492	726	5
132,411	59,414	50,991	13,690	2,265	614	11,710	2,329	200,335	106,142	29,582	11,520	6
5,604	3,146	1,024	434	106	22	394	90	2,529	1,549	1,221	411	7
6,446	2,622	1,102	454	13	4	477	99	1,200	665	151	46	8
3,368	1,441	124	67	...	...	12	3	6,892	3,778	2,366	1,007	9
2,938	1,198	159	71	3	1	48	9	11,014	7,896	194	61	10
1,634	1,022	263	173	...	...	96	25	10,245	6,173	1,440	675	11
2,555	1,077	4	2	...	...	8	2	9,395	5,272	167	83	12
3,114	1,012	30	13	...	...	...	...	6,416	2,967	534	216	13
1,875	481	...	...	...	...	32	4	388	145	53	15	14
17,465	5,899	885	351	168	51	1,898	337	5,951	1,846	168	45	15
299,763	137,949	60,561	18,720	2,562	696	19,563	4,088	567,288	254,083	80,669	29,415	
4,101	1,228	246	112	32	9	2,072	366	1,917	817	8	2	16
298	104	155	52	101	20	110	11	20,099	8,528	723	252	17
4,399	1,332	401	164	133	29	2,182	377	22,016	9,345	731	254	
6,687	2,442	12,322	4,882	1,437	315	9,564	1,668	9,816	3,586	889	336	18
884	185	73	25	13	3	2,337	240	20	10	...	...	19
6,158	2,244	1,204	521	...	...	1,803	377	3,694	1,546	721	294	20
2,292	1,007	830	364	...	...	3,286	561	1,994	1,108	453	240	21
3,833	1,551	477	239	2	1	870	316	1,393	1,135	312	280	22
2,451	1,365	155	77	...	...	1,129	237	1,069	939	527	534	23
678	418	28	16	...	...	351	62	168	124	123	89	24
1,446	1,210	8	8	...	...	1,490	363	842	730	376	354	25
771	826	13	10	...	...	365	134	369	436	273	317	26
6,167	3,346	391	185	...	...	1,807	546	1,614	1,364	1,896	1,575	27
31,367	14,594	15,501	6,327	1,452	319	23,002	4,504	20,979	10,978	5,570	4,019	
299,763	137,949	60,561	18,720	2,562	696	19,563	4,088	567,288	254,083	80,669	29,415	
4,399	1,332	401	164	133	29	2,182	377	22,016	9,345	731	254	
31,367	14,594	15,501	6,327	1,452	319	23,002	4,504	20,979	10,978	5,570	4,019	
335,529	153,875	76,463	25,211	4,147	1,044	44,747	8,969	610,283	274,406	86,970	33,688	
310,781	137,724	63,311	22,227	4,743	1,053	37,242	7,418	398,642	210,772	80,996	31,829	
24,748	16,151	13,152	2,984	...	...	7,505	1,551	211,641	63,634	5,974	1,859	
...	...	...	...	596	9	...	...	...	...	...	...	

APPENDIX C.—

FISH USED IN A FRESH STATE.—STATEMENT showing the Total Quantity consumed Fresh in the Localities

No.	DISTRICTS.	Eels.		Gurnards.		Cat Fish.		Monks (Anglers).	
	EAST COAST.	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£
1	Eyemouth,	...	...	...	...	61	35	...	...
2	Leith,	127	94	2,548	364	5,732	2,335	777	231
3	Anstruther,	33	27	...	...	22	11	...	...
4	Montrose,	57	30	1,984	455	1,033	588	562	184
5	Stonehaven,	2	1	...	...	...	...	...	...
6	Aberdeen,	2,029	1,009	2,410	222	1,717	395	1,697	294
7	Peterhead,	57	19	...	...	64	14	...	...
8	Fraserburgh,	143	69	...	...	3	1	...	...
9	Banff,	...	...	...	...	...	...	...	...
10	Buckie,	67	30	...	...	...	...	...	...
11	Findhorn,	10	6	...	...	...	...	...	...
12	Cromarty,	...	...	...	...	11	3	...	...
13	Helmsdale,	39	13	...	...	...	...	...	...
14	Lybster,	21	11	...	...	...	...	...	...
15	Wick,	447	242	175	41	7	3	...	...
	East Coast Totals carried down,	3,032	1,551	7,117	1,082	8,650	3,385	3,036	709
	Orkney and Shetland.								
16	Orkney,	...	...	...	...	...	...	...	...
17	Shetland,	2	1	...	...	5	1	...	...
	Orkney and Shetland Totals carried down,	2	1	...	...	5	1	...	...
	WEST COAST.								
18	Stornoway,	3,941	2,001	785	173	...	...	...	...
19	Barra,	280	97	...	...	...	...	...	...
20	Loch Broom,	519	184	...	...	...	...	...	...
21	Loch Carron and Skye,	1,084	553	...	...	...	...	...	...
22	Fort-William,	4,673	2,257	...	...	...	...	...	...
23	Campbeltown,	108	58	...	...	...	...	...	...
24	Inveraray,	134	71	...	...	...	...	...	...
25	Rothesay,	129	65	...	...	...	...	...	...
26	Greenock,	175	102	...	...	...	...	...	...
27	Ballantrae,	1,223	708	...	...	...	...	...	...
	West Coast Totals carried down,	12,266	6,096	785	173	...	...	...	...
	Totals brought down.								
	East Coast,	3,032	1,551	7,117	1,082	8,650	3,385	3,036	709
	Orkney and Shetland,	2	1	...	...	5	1	...	...
	West Coast,	12,266	6,096	785	173	...	...	...	...
	Grand Totals for 1906,	15,300	7,648	7,902	1,255	8,655	3,386	3,036	709
	Grand Totals for 1905,	18,425	7,884	8,555	1,501	8,735	2,946	3,701	824
	Increase in 1906,	...	...	...	...	...	440	...	...
	Decrease in 1906,	3,125	236	653	246	80	...	665	115

continued.

and Value of all Fish landed and sold for use in a Fresh State, or where taken, in the Year 1906.

Hake.		Squid.		Turbot.		Halibut.		Lemon Soles.		Flounders.		No.
Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	
...	...	...	...	...	...	...	...	...	...	10	9	1
120	45	632	301	1,957	3,860	3,135	5,064	11,611	14,867	6,254	6,019	2
...	...	...	...	...	...	28	59	...	...	100	94	3
10	8	222	142	512	1,950	190	437	2,481	6,063	1,206	1,146	4
...	...	...	...	...	...	25	25	52	52	...	...	5
22,003	13,983	1,904	1,495	2,994	12,069	29,925	55,814	18,521	44,362	...	...	6
...	...	...	...	...	...	189	472	18	32	189	97	7
1	1	...	...	1	3	116	246	...	...	2	1	8
...	...	...	...	...	...	13	22	82	249	5	2	9
...	...	...	...	...	...	49	101	...	...	40	34	10
...	...	...	...	...	...	29	61	24	55	1,236	1,083	11
...	...	...	...	...	...	..	...	...	...	296	151	12
...	...	...	...	...	...	24	44	...	...	86	62	13
...	...	...	...	...	...	8	15	...	...	...	...	14
...	...	...	...	...	...	437	869	...	...	1,487	470	15
22,134	14,037	2,758	1,938	5,464	17,882	34,168	63,229	32,789	65,680	10,911	9,168	
...	...	...	...	3	3	137	174	2	2	161	80	16
3	1	...	...	...	...	1,061	1,002	...	...	20	9	17
3	1	...	...	3	3	1,198	1,176	2	2	181	89	
44	42	...	...	123	61	1,142	1,166	6	6	1,596	595	18
...	...	...	...	...	...	85	77	...	...	698	152	19
...	...	...	...	...	...	15	29	3	5	189	136	20
20	4	...	...	...	...	10	19	22	20	171	116	21
7	5	...	...	9	19	56	75	2	2	290	240	22
8	4	...	...	3	6	...	...	...	...	...	...	23
...	...	...	...	...	...	...	...	...	...	...	...	24
16	16	...	...	...	...	...	...	3	3	86	103	25
...	...	...	...	...	...	...	...	...	...	51	71	26
...	...	...	...	97	226	12	25	1	4	780	626	27
95	71	...	...	232	312	1,320	1,391	37	40	3,861	2,039	
22,134	14,037	2,758	1,938	5,464	17,882	34,168	63,229	32,789	65,680	10,911	9,168	
3	1	...	...	3	3	1,198	1,176	2	2	181	89	
95	71	...	...	232	312	1,320	1,391	37	40	3,861	2,039	
22,232	14,109	2,758	1,938	5,699	18,197	36,686	65,796	32,828	65,722	14,953	11,296	
23,073	11,195	1,993	1,380	6,475	21,313	35,563	58,486	30,850	55,379	17,306	12,941	
...	2,914	765	558	...	...	1,123	7,310	1,978	10,343	...	...	
841	...	...	...	776	3,116	...	...	...	...	2,353	1,645	

APPENDIX C.—

FISH USED IN A FRESH STATE.—STATEMENT showing the Total Quantity consumed Fresh in the Localities

No.	DISTRICTS.	Plaice.		Brill.		Dabs.		Witches.		Megrims.	
	EAST COAST.	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£
1	Eyemouth, . . .	...	...	...	...	...	...	...	...	...	...
2	Leith, ...	17,431	17,126	612	750	2,206	670	722	708	556	309
3	Anstruther, . . .	1,734	1,561	...	...	527	253	...	...	...	...
4	Montrose, . . .	8,884	4,445	95	154	819	453	140	227	174	208
5	Stonehaven, . . .	29	29	...	...	110	55	...	...	...	...
6	Aberdeen, . . .	27,653	50,062	322	750	1872	940	15,803	22,900	9,967	9,847
7	Peterhead, . . .	362	392	...	...	541	231	...	...	...	...
8	Fraserburgh, . .	89	94	...	...	6	3	4	5	..	...
9	Banff, ...	...	...	...	...	27	12	...	...	...	...
10	Buckie, ...	8	8	...	...	...	...	...	...	...	...
11	Findhorn, . . .	27	22	...	...	...	...	...	...	...	...
12	Cromarty, . . .	1,484	852	...	...	12	8	...	...	...	...
13	Helmsdale, . . .	1,446	1,082	...	...	...	...	...	...	...	...
14	Lybster, . . .	...	...	...	...	...	...	...	...	...	...
15	Wick, ...	774	280	...	...	7	4	...	...	...	...
	East Coast Totals carried down, . .	54,921	75,953	1,029	1,654	6,127	2,629	16,669	23,840	10,697	10,364
	Orkney and Shetland.										
16	Orkney, . . .	5	4	...	...	...	...	...	...	...	...
17	Shetland, . . .	30	26	...	...	63	23	...	...	...	...
	Orkney and Shetland Totals carried down,	35	30	...	...	63	23	...	...	...	...
	WEST COAST.										
18	Stornoway, . . .	38	54	...	...	...	...	5	6	...	...
19	Barra, ...	163	60	...	...	269	60	...	...	...	...
20	Loch Broom, . .	12	14	...	...	...	...	...	...	...	...
21	Loch Carron and Skye,	42	40	...	...	4	3	...	...	...	...
22	Fort-William, . .	27	38	...	...	...	...	31	33	11	10
23	Campbeltown, . .	474	642	...	...	8	8	...	...	...	...
24	Inveraray, . . .	2	3	..	...	...	...	...	...	...	...
25	Rothesay, . . .	117	152	...	...	...	...	2	2	...	...
26	Greenock, . . .	633	763	...	...	1	1	...	...	...	...
27	Ballantrae, - . .	2,366	2,502	9	12	6	4	...	...	...	...
	West Coast Totals carried down, . .	3,874	4,268	9	12	288	76	38	41	11	10
	Totals brought down.										
	East Coast, . . .	54,921	75,953	1,029	1,654	6,127	2,629	16,669	23,840	10,697	10,364
	Orkney and Shetland, .	35	30	...	...	63	23	...	...	...	...
	West Coast, . . .	3,874	4,268	9	12	288	76	38	41	11	10
	Grand Totals for 1906,	58,830	80,251	1,038	1,666	6,478	2,728	16,707	23,881	10,708	10,374
	Grand Totals for 1905,	56,249	77,068	1,016	1,585	6,621	2,710	22,657	23,811	11,660	10,531
	Increase in 1906, . .	2581	3,183	22	81	...	18	...	70	...	...
	Decrease in 1906, . .	...	...	...	...	143	...	5950	...	952	157

continued.

and Value of all Fish landed and sold for use in a Fresh State, or where taken, in the Year 1906.

Skates and Rays.		Unclassified White Fish.		Totals.		Value of Shell Fish.	Grand Total Value of all Fish sold for Use Fresh.	No.
Cwts.	£	Cwts.	£	Cwts.	£	£	£	
...	...	...	...	41,240	15,328	2,146	17,474	1
3,788	1,140	989	255	429,542	195,172	4,291	199,463	2
114	34	...	...	150,421	60,084	3,627	63,711	3
376	206	19	3	132,412	64,202	4,223	68,425	4
60	20	...	...	17,131	6,524	1,341	7,865	5
66,313	19,236	2,599	444	670,574	440,532	167	440,699	6
729	199	...	...	51,341	20,830	380	21,210	7
733	297	3	1	24,935	8,848	1,029	9,877	8
91	37	46	9	17,169	7,707	405	8,112	9
550	158	..	...	22,813	11,926	45	11,971	10
556	142	16	5	24,417	11,635	289	11,924	11
13	4	101	28	14,268	7,527	1,220	8,747	12
7	2	...	...	13,194	5,843	294	6,137	13
...	...	...	...	2,721	794	79	873	14
2,238	753	8	2	48,214	16,949	5,122	22,071	15
75,568	22,228	3,781	747	1,660,392	873,901	24,658	898,559	
241	60	1,254	71	11,467	3,259	9,349	12,608	16
739	126	955	113	25,571	10,641	318	10,959	17
980	186	2,209	184	37,038	13,900	9,667	23,567	
10,346	2,067	2,261	575	100,405	32,778	3,229	36,007	18
305	65	...	...	7,915	1,779	5,726	7,505	19
811	278	232	58	23,423	7,822	4,311	12,133	20
591	265	134	46	21,853	8,393	7,204	15,597	21
5,843	2,025	61	18	19,341	8,714	3,260	11,974	22
416	108	18	9	44,594	20,475	2,695	23,170	23
86	17	...	...	17,412	5,809	1,192	7,001	24
57	28	...	...	52,395	17,254	680	17,934	25
129	48	13	7	31,118	10,749	2,321	13,070	26
2,243	780	12	3	75,282	30,023	7,379	37,402	27
20,827	5,681	2,731	716	393,738	143,796	37,997	181,793	
75,568	22,228	3,781	747	1,660,392	873,901	24,658	898,559	
980	186	2,209	184	37,038	13,900	9,667	23,567	
20,827	5,681	2,731	716	393,738	143,796	37,997	181,793	
97,375	28,095	8,721	1,647	2,091,168	1,031,597	72,322	1,103,919	
100,116	25,580	8,138	1,367	1,831,082	878,210	70,662	948,872	
...	2,515	583	280	260,086	153,387	1,660	155,047	
2,741	...	...	...	...	...	...	...	

APPENDIX D.—

FISH CURED.—I. HERRINGS CURED.—RETURN Showing the Quantities of Cure and the Number and Tonnage of Vessels

No.	DISTRICTS.	CURED ON SHORE.					
		Barrels Gutted.	Barrels Un-gutted.	Barrels Kip-pered.	Barrels of Bloaters or Reds.	Barrels Tinned.	Total Number of Barrels.
	EAST COAST.						
1	Eyemouth,	114,827	453	18,644	3,427	...	137,351
2	Leith,	140	500	2,959	4,187	...	7,786
3	Anstruther,	21,817	...	299	282	...	22,398
4	Montrose,	19,782	...	709	292	50	20,833
5	Stonehaven,	3,936	...	1,484	259	...	5,679
6	Aberdeen,	108,276	...	8,739	2,462	20,886	140,363
7	Peterhead,	238,604	...	26,756	115	525	266,000
8	Fraserburgh,	264,060	...	23,338	17	8,032	295,447
9	Banff,	9,015	...	2,480	...	...	11,495
10	Buckie,	12,106	...	1,156	...	...	13,262
11	Findhorn,	11,874	...	30	30	...	11,934
12	Cromarty,	...	...	...	...	...	...
13	Helmsdale,	528	...	...	...	...	528
14	Lybster,	2,090	...	618	...	...	2,708
15	Wick,	132,247	2,691	14,985	...	...	149,923
	East Coast Totals carried down,	939,302	3,644	102,197	11,071	29,493	1,085,707
	Orkney and Shetland.						
16	Orkney,	58,660	...	589	...	...	59,249
17	Shetland,	678,319	8,620	10,397	...	...	697,336
	Orkney and Shetland Totals carried down,	736,979	8,620	10,986	...	...	756,585
	WEST COAST.						
18	Stornoway,	34,720	3,914	13,515	...	...	52,149
19	Barra,	66,104	...	...	...	...	66,104
20	Loch Broom,	3,157	...	...	...	...	3,157
21	Loch Carron and Skye,	102	...	...	...	...	102
22	Fort-William,	230	...	...	...	...	230
23	Campbeltown,	280	...	20	...	...	300
24	Inveraray,	2,323	...	12	...	...	2,335
25	Rothesay,	483	...	290	...	...	773
26	Greenock,	5,758	10	17,598	145	...	23,511
27	Ballantrae,	...	...	57	...	...	57
	West Coast Totals carried down,	113,157	3,924	31,492	145	...	148,718
	Totals brought down.						
	East Coast,	939,302	3,644	102,197	11,071	29,493	1,085,707
	Orkney and Shetland,	736,979	8,620	10,986	...	...	756,585
	West Coast,	113,157	3,924	31,492	145	...	148,718
	Grand Totals for 1906,	1,789,438	16,188	144,675	11,216	29,493	1,991,010
	Grand Totals for 1905,	1,832,386	5,295	150,377	14,658	27,540	2,030,256
	Increase in 1906,	...	10,893	...	...	1,953	...
	Decrease in 1906,	42,948	...	5,702	3,442	...	39,246

No. I.

Herrings Cured, distinguishing those Cured on Shore and at Sea, and giving the Modes of fitted out for Curing at Sea, in the Year 1906.

CURED AT SEA.						Total Barrels of Herrings Cured on Shore and at Sea.	DISTRICTS.	No.
Vessels fitted out.			Barrels Gutted.	Barrels Un-gutted.	Total Number of Barrels.			
Number.	Tonnage.	Men.						
							EAST COAST.	
...	...	...	...	...	...	137,351	Eyemouth.	1
...	...	...	...	...	...	7,786	Leith.	2
...	...	...	...	...	...	22,398	Anstruther.	3
...	...	...	...	...	...	20,833	Montrose.	4
...	...	...	...	...	...	5,679	Stonehaven.	5
...	...	...	...	...	...	140,363	Aberdeen.	6
...	...	...	...	...	...	266,000	Peterhead.	7
...	...	...	...	...	...	295,447	Fraserburgh.	8
...	...	...	...	...	...	11,495	Banff.	9
...	...	...	...	...	...	13,262	Buckie.	10
...	...	...	...	...	...	11,934	Findhorn.	11
...	...	...	...	...	...	...	Cromarty.	12
...	...	...	...	...	...	528	Helmsdale.	13
...	...	...	...	...	...	2,708	Lybster.	14
3	442	29	940	...	940	150,863	Wick.	15
3	442	29	940	...	940	1,086,647	East Coast Totals carried down.	
							Orkney and Shetland.	
...	...	...	...	...	...	59,249	Orkney.	16
6	913	61	2,726	...	2,726	700,062	Shetland.	17
6	913	61	2,726	...	2,726	759,311	Orkney and Shetland Totals carried down.	
							WEST COAST.	
5	240	21	1,081	...	1,081	53,230	Stornoway.	18
1	48	6	1,099	...	1,099	67,203	Barra.	19
...	...	...	608	...	608	3,765	Loch Broom,	20
7	410	24	398	...	398	500	Loch Carron and Skye.	21
1	38	3	...	...	...	230	Fort-William	22
...	...	...	...	...	...	300	Campbeltown.	23
...	...	...	...	...	...	2,335	Inveraray.	24
...	...	...	...	...	...	773	Rothesay.	25
...	...	...	...	...	...	23,511	Greenock.	26
...	...	...	...	...	...	57	Ballantrae.	27
14	736	54	3,186	...	3,186	151,904	West Coast Totals carried down.	
							Totals brought down.	
3	442	29	940	...	940	1,086,647	East Coast.	
6	913	61	2,726	...	2,726	759,311	Orkney and Shetland.	
14	736	54	3,186	...	3,186	151,904	West Coast.	
23	2,091	144	6,852	...	6,852	1,997,862	Grand Totals for 1906.	
41	5,238	358	46,504	34,841	81,345	2,111,601	Grand Totals for 1905.	
...	...	...	...	...	...	...	Increase in 1906.	
18	3,147	214	39,652	34,841	74,493	113,739	Decrease in 1906.	

APPENDIX D.—

II. FISH, OTHER THAN HERRINGS, CURED.—RETURN Showing the Quantities of

No.	DISTRICTS.	COD.			LING.		TUSK.	
		Cwts. Dried.	Barrels Pickled.	Cwts. Smoked.	Cwts. Dried.	Cwts. Smoked.	Cwts. Dried.	Cwts. Smoked.
	EAST COAST.							
1	Eyemouth,	...	...	702	...	...	...	...
2	Leith,	...	...	...	...	...	...	...
3	Anstruther,	2,300	...	...	510	...	30	...
4	Montrose,	230	...	...	2	...	...	...
5	Stonehaven,	120	...	...	...	...	...	...
6	Aberdeen,	40,724	280	121,600	8,622	12,500	1,543	525
7	Peterhead,	155	...	1,296	...	...	...	...
8	Fraserburgh,	300	60	757	100	...	5	...
9	Banff,	...	...	...	...	...	...	...
10	Buckie,	30	97	...	...	...	...	...
11	Findhorn,	...	...	...	...	...	...	...
12	Cromarty,	65	...	40	...	...	...	...
13	Helmsdale,	...	...	...	...	...	...	...
14	Lybster,	...	43	...	...	...	...	...
15	Wick,	1,514	544	...	63	...	...	...
	East Coast Totals carried down,	45,438	1,024	124,395	9,297	12,500	1,578	525
	Orkney and Shetland.							
16	Orkney,	26,920	...	118	60	...	...	...
17	Shetland,	8,300	4	9	930	...	395	...
	Orkney and Shetland Totals carried down,	35,220	4	127	990	...	395	...
	WEST COAST							
18	Stornoway,	733	713	...	3,537	...	...	...
19	Barra,	111	...	...	400	...	20	...
20	Loch Broom,	...	...	...	...	...	...	...
21	Loch Carron and Skye,	1	...	...	33	...	...	...
22	Fort-William,	185	...	...	55	...	...	...
23	Campbeltown,	279	...	...	10	...	...	...
24	Inveraray,	...	...	...	...	...	...	...
25	Rothesay,	...	...	...	...	...	...	...
26	Greenock,	...	...	...	...	...	...	...
27	Ballantrae,	...	...	...	...	...	...	...
	West Coast Totals carried down,	1,309	713	...	4,035	...	20	...
	Totals brought down.							
	East Coast,	45.438	1,024	124,395	9,297	12,500	1,578	525
	Orkney and Shetland,	35,220	4	127	990	...	395	...
	West Coast,	1,309	713	...	4,035	...	20	...
	Grand Totals for 1906,	81,967	1,741	124.522	14,322	12,500	1,993	525
	Grand Totals for 1905,	65,709	1,200	154,343	21,102	15,290	3,395	1,378
	Increase in 1906,	16,258	541	...	...	...	...	...
	Decrease in 1906	...	...	29,821	6,780	2,790	1,402	853

No. I.—*continued.*

Cod, Ling, Tusk (Torsk), Saithe (Coalfish), and Haddocks Cured during the year 1906.

SAITHE.		HADDOCKS.			MACKEREL.	DISTRICTS.	No.
Cwts. Dried.	Cwts. Smoked.	Cwts. Dried.	Cwts. Smoked.	Cwts. Cured in Pickle.	Barrels Cured in Pickle.		
						EAST COAST.	
...	...	...	1,380	...	...	Eyemouth.	1
...	...	...	2,370	...	...	Leith.	2
257	...	...	280	...	...	Anstruther.	3
14	...	...	940	...	...	Montrose.	4
...	...	...	1,600	...	...	Stonehaven.	5
10,388	18,000	13,448	269,981	626	...	Aberdeen.	6
123	...	...	1,515	...	...	Peterhead.	7
40	...	...	1,690	...	...	Fraserburgh.	8
...	...	...	6,461	...	...	Banff.	9
...	...	...	1,385	...	...	Buckie.	10
...	...	...	1,607	...	...	Findhorn.	11
...	...	...	385	...	...	Cromarty.	12
...	...	...	...	...	...	Helmsdale.	13
...	...	...	30	...	...	Lybster.	14
200	...	64	540	...	...	Wick.	15
11,022	18,000	13,512	290,164	626	...	East Coast Totals carried down.	
						Orkney and Shetland.	
...	...	...	368	...	...	Orkney.	16
1,491	...	...	...	...	...	Shetland.	17
1,491	...	...	368	...	...	Orkney and Shetland Totals carried down.	
						WEST COAST.	
1,207	...	...	2,050	...	...	Stornoway.	18
29	...	...	...	...	1,304	Barra.	19
...	...	...	...	...	...	Loch Broom.	20
...	...	...	...	...	85	Loch Carron and Skye.	21
4	...	...	...	...	...	Fort-William.	22
230	...	...	...	...	...	Campbeltown.	23
...	...	...	...	...	...	Inveraray.	24
...	...	...	...	...	...	Rothesay.	25
...	...	...	...	...	...	Greenock.	26
...	...	...	...	...	...	Ballantrae.	27
1,470	...	...	2,050	...	1,389	West Coast Totals carried down.	
						Totals brought down.	
11,022	18,000	13,512	290,164	626	...	East Coast.	
1,491	...	...	368	...	...	Orkney and Shetland.	
1,470	...	...	2,050	...	1,389	West Coast.	
13,983	18,000	13,512	292,582	626	1,389	Grand Totals for 1906.	
19,406	15,960	11,709	340,433	...	1,473	Grand Totals for 1905.	
...	2,040	1,803	...	626	...	Increase in 1906.	
5,423	...	...	47,851	...	84	Decrease in 1906.	

APPENDIX D.—No. II.

STATEMENT showing the Number of Barrels of Herrings Cured Gutted and Ungutted, on the East and West Coasts of Scotland, for the Ninety-six years ended 31st December, 1906.

Year ended	* East Coast.			West Coast.			GRAND TOTAL.
	Gutted.	Ungutted.	Total.	Gutted.	Ungutted.	Total.	
6th April 1811	2,008½	6,630	8,638½	62,186	19,110	81,296	89,934½
" 1812	4,325½	10,332	14,657½	65,922	24,518	90,440	105,097½
" 1813	9,179	20,950½	30,129½	76,561¾	31,025½	107,587¼	137,716¾
" 1814	9,503	46,800½	56,303½	37,969	5,773	43,742	100,045½
" 1815	24,314	36,827	61,141	76,021¼	7,756	83,777¼	144,918¼
" 1816	55,411½	18,416½	73,828	73,292½	2,578¼	75,870¾	149,698¾
" 1817	90,710½	26,252½	116,963	60,581½	3,233½	63,815	180,778
" 1818	118,594¾	8,287¼	126,882	76,765	4,491½	81,256½	208,138½
" 1819	221,959½	22,158	244,117½	75,197½	6,441	81,638½	325,756
" 1820	267,556½	27,391½	294,948	72,629½	4,512	77,141½	372,089½
" 1821	318,473½	23,909¼	342,382¾	88,626½	2,613	91,239½	433,622¼
" 1822	229,070	12,808¾	241,878¾	56,342½	1,328	57,670½	299,549¼
" 1823	183,687	15,256¼	198,943¼	34,211	245½	34,456½	233,399¾
" 1824	272,340½	32,402	304,742½	52,792	802¼	53,594¼	358,336¾
" 1825	227,667	28,849¾	256,516¾	64,623	593	65,216	321,732¾
" 1826	289,101	31,703¼	320,804¼	42,602	121	42,723	363,527¼
" 1827	211,042¾	22,241½	233,284¼	43,231	117	43,348	276,632¼
" 1828	287,906½	37,882½	325,789	45,632	2,039½	47,671½	373,460½
" 1829	249,365½	41,047¼	290,412¾	47,525	945	48,470	338,882¾
" 1830	216,427½	35,226	251,653½	59,494	639	60,133	311,786½
" 1831	315,479	51,609¾	367,088¾	46,631	855	47,486	414,574¾

* Including Orkney and Shetland.

APPENDIX D.—No. II.—*continued.*

Year ended	* East Coast.			West Coast.			GRAND TOTAL.
	Gutted.	Ungutted.	Total.	Gutted.	Ungutted.	Total.	
5th April 1832	259,197½	36,183½	295,381	49,216¼	3,167	52,383¼	347,764¼
,, 1833	267,928½	45,564¾	313,493¼	77,144	573	77,717	391,210¼
,, 1834	315,159	56,374¾	371,533¾	64,427½	137	64,564½	436,098¼
,, 1835	166,539½	33,339½	199,879	45,091½	633	45,724½	245,603½
,, 1836	343,693½	68,891¾	412,585¼	46,554½	479	47,033½	459,618¾
,, 1837	229,371	71,449¼	300,820¼	54,859	1,892½	56,751½	357,571¾
,, 1838	307,625	82,634¾	390,259¾	68,990½	2,374½	71,365	461,624¾
,, 1839	308,581	119,489¾	428,070¾	66,046½	1,672½	67,719	495,789¾
,, 1840	345,074½	103,160	448,234½	54,208½	343	54,551½	502,786
,, 1841	334,539	78,225¼	412,764¼	87,562½	3,402½	90,965	503,729¼
,, 1842	404,502½	116,675½	521,178	78,755½	2,183½	80,939	602,117
,, 1843	376,374	118,755¾	495,129¾	61,568½	1,627	63,195½	558,325¼
,, 1844	384,729	105,927½	490,656½	81,643	4,776	86,419	577,075½
5th January 1845	305,461½	72,649¼	378,110¾	80,836	901	81,737	459,847¾
,, 1846	343,927	82,607½	426,534½	64,056	3,753½	67,809½	494,344
,, 1847	343,009¾	137,296¾	480,306½	67,613	11,263	78,876	559,182½
,, 1848	323,471½	135,479	458,950½	46,636½	9,570	56,206½	515,157
,, 1849	337,450	155,654¼	493,104¼	52,473	6,981	59,454	552,558¼
,, 1850	427,138	152,530	579,668	77,171½	25,029¾	102,201¼	681,869¼
,, 1851	320,493	129,532¾	450,025¾	57,694	21,134	78,828	528,853¾
,, 1852	348,573	109,933	458,506	68,660¼	36,220¾	104,881	563,387
31st December 1852	331,055½	89,355	420,410½	44,623½	13,903	58,526½	478,937
,, 1853	482,017	165,459¼	647,476¼	78,350	28,431½	106,781½	754,257¾
,, 1854	410,332	132,977½	543,309½	48,247½	31,207½	79,455	622,764½

* Including Orkney and Shetland.

APPENDIX D.—No. II.—*continued.*

Year ended		* East Coast.			West Coast.			GRAND TOTAL.
		Gutted.	Ungutted.	Total.	Gutted.	Ungutted.	Total.	
31st December	1855	505,481¾	136,687½	642,169¼	77,175½	32,631	109,806½	751,975¾
,,	1856	396,650	92,400½	489,050½	69,755½	32,492½	102,248	591,298½
,,	1857	390,775	59,712½	450,487½	74,447½	25,763½	100,211	550,698½
,,	1858	410,524¾	111,440¾	521,965½	59,868½	23,350	83,218½	605,184
,,	1859	308,518¼	55,584	364,102¼	72,541	20,487	93,028	457,130¼
,,	1860	424,201½	103,086¼	527,287¾	71,894	37,891½	109,785½	637,073¼
,,	1861	447,931½	97,207	545,138½	71,241½	34,336½	105,578	650,716½
,,	1862	536,602½	88,911	625,513½	119,257½	52,685	171,942½	797,456
,,	1863	445,596½	75,511¾	521,108¼	61,396½	26,810	88,206½	609,314¾
,,	1864	378,752	88,107¾	466,859¾	99,737½	42,889	142,626½	609,486¼
,,	1865	374,424	73,814½	448,238½	95,920½	57,207	153,127½	601,366
,,	1866	398,358	72,420¼	470,778¼	99,396½	74,431	173,827½	644,605¾
,,	1867	492,172¼	81,978½	574,150¾	139,547¼	90,392	229,939¼	804,090
,,	1868	363,922½	62,906	426,828½	81,546	129,886¼	211,432¼	638,260¾
,,	1869	395,500½	61,809¾	457,310¼	93,330½	124,502¼	217,832¾	675,143
,,	1870	508,805½	98,318	607,123½	148,254	77,783	226,037	833,160½
,,	1871	585,172	94,178	679,350	83,317½	62,808¼	146,125¾	825,475¾
,,	1872	623,443½	62,341	685,784½	48,260	39,815	88,075	773,859½
,,	1873	710,376½	96,983½	807,360	86,525½	45,348	131,873½	939,233½
,,	1874	789,345½	77,489¾	866,835¼	97,657	36,068¾	133,725¾	1,000,561
,,	1875	774,293½	67,729	842,022½	60,529	40,428½	100,957½	942,980
,,	1876	454,164	59,230	513,394	32,074½	52,729	84,803½	598,197½
,,	1877	618,116¾	65,529¼	683,646	98,754½	65,318¼	164,072¾	847,718¾

* Including Orkney and Shetland.

APPENDIX D.—No. II.—*continued.*

Year ended		* East Coast.			West Coast.			GRAND TOTAL.
		Gutted.	Ungutted.	Total.	Gutted.	Ungutted.	Total.	
31st December	1878	702,433½	70,927½	773,361	69,122½	63,284½	132,407	905,768
,,	1879	563,754	62,833½	626,587½	92,237	122,971½	215,208½	841,796
,,	1880	1,096,953½	104,151½	1,201,105	127,245	145,250¼	272,495¼	1,473,600¼
,,	1881	830,751½	73,602¼	904,353¾	84,346½	122,455	206,801½	1,111,155¼
,,	1882	879,243½	98,983	978,226½	101,512	203,235	304,747	1,282,973½
,,	1883	960,428½	87,477¼	1,047,905¾	72,658½	148,848¼	221,506¾	1,269,412½
,,	1884	1,323,989½	132,061¼	1,456,050¾	128,223½	112,803	241,026½	1,697,077¼
,,	1885	1,244,259	74,723½	1,318,982½	108,190	145,779¾	253,969¾	1,572,952¼
,,	1886	1,017,152	125,287¾	1,142,439¾	76,211	93,572½	169,783½	1,312,223¼
,,	1887	962,116	127,588	1,089,704	101,937¾	111,782½	213,720¼	1,303,424¼
,,	1888	790,458	82,155¼	872,613¼	116,542	129,717	246,259	1,118,872¼
,,	1889	1,071,686	112,171	1,183,857	105,417	108,233	213,650	1,397,507
,,	1890	1,042,089	81,218½	1,123,307½	142,340½	38,955	181,295½	1,304,603
,,	1891	797,219	61,427	858,646	208,024	59,402	267,426	1,126,072
,,	1892	1,012,452	82,267	1,094,719	125,299	37,924	163,223	1,257,942
,,	1893	1,177,365	110,236	1,287,601	90,977	30,960¼	121,937¼	1,409,538¼
,,	1894	1,312,926	98,783	1,411,709	91,489	14,879	106,368	1,518,077
,,	1895	1,314,225	79,695	1,393,920	114,902	19,312	134,214	1,528,134
,,	1896	1,232,549	101,098	1,333,647	132,234	26,035	158,269	1,491,916
,,	1897	732,454	72,457	804,911	143,319	41,212	184,531	989,442
,,	1898	1,500,533	92,883½	1,593,416½	174,743	37,188	211,931	1,805,347
,,	1899	912,841	71,512	984,353	154,768	36,534	191,302	1,175,655
,,	1900	968,077	98,673	1,066,750	156,522	32,333	188,855	1,255,605
,,	1901	1,334,010	118,173	1,452,183	109,056	44,646	153,702	1,605,885
,,	1902	1,507,138	125,933	1,633,071	123,437	46,651	170,088	1,803,159
,,	1903	1,331,664	138,949	1,470,613	105,654	42,543	148,197	1,618,810
,,	1904	1,737,345	170,510	1,907,855	102,548	52,571	155,119	2,062,974
,,	1905	1,766,734	164,098	1,930,832	112,156	68,613	180,769	2,111,601
,,	1906	1,679,947	166,011	1,845,958	116,343	35,561	151,904	1,997,862

* Including Orkney and Shetland.

APPENDIX E.

CURED FISH BRANDED.—RETURN showing the Number of Barrels of Cured
Fees Collected

DISTRICTS.	NUMBER OF BARRELS OF CURED			
	La. Full.	Full.	Mat. Full.	Spent.
EAST COAST.				
Eyemouth,	...	7,142½	14,023½	1,045½
Leith,	237½	...	...	...
Anstruther,	...	1,117	1,402	95
Montrose,	107½	1,525½	1,590½	186
Stonehaven,	...	271	237	144
Aberdeen,	580½	5,408½	4,827½	1,110
Peterhead,	5,058	18,800	5,184½	11,491½
Fraserburgh,	4,361½	16,069	9,195½	12,962½
Banff,	...	259	387	177
Buckie,	...	253½	270	96
Findhorn,	...	95	237	39
Cromarty,	...	...	...	...
Helmsdale,	...	384	265	9
Lybster,	...	122	575	49½
Wick,	1,395½	4,983	3,370½	3,037½
East Coast Totals carried down,	11,740½	56,430	41,565	30,442½
Orkney and Shetland.				
Orkney,	1,867½	3,587	1,385½	6,304½
Shetland,	73,100½	12,299	26½	13,255½
Orkney and Shetland Totals carried down,	74,968	15,886	1,412	19,560
Totals brought down.				
East Coast,	11,740½	56,430	41,565	30,442½
Orkney and Shetland,	74,968	15,886	1,412	19,560
Grand Totals for 1906,	86,708½	72,316	42,977	50,002½
Grand Totals for 1905.	85,100½	91,157½	40,660½	93,769½
Increase in 1906,	1,608	...	2,316½	...
Decrease in 1906,	...	18,841½	...	43,767

—No. I.

Herrings Branded, distinguishing the different Brands, and the Amount of Brand during the Year 1906.

HERRINGS BRANDED.		Fees Received.			DISTRICTS.
Mattie.	TOTAL.	£	s.	d.	
					EAST COAST.
6,947	29,158½	485	19	6	Eyemouth.
...	237½	3	19	2	Leith.
137	2,751	45	17	0	Anstruther.
2,753	6,162½	102	14	2	Montrose.
1,062	1,714	28	11	4	Stonehaven.
3,407	15,333½	255	11	2	Aberdeen.
12,974½	53,508½	891	16	2	Peterhead.
14,619½	57,208	953	9	4	Fraserburgh.
625	1,448	24	2	8	Banff.
236½	856	14	5	4	Buckie.
362½	733½	12	4	6	Findhorn.
...	...	...			Cromarty.
499	1,157	19	5	8	Helmsdale.
181½	928	15	9	4	Lybster.
4,611	17,397½	289	19	2	Wick.
48,415½	188,593½	3,143	4	6	East Coast Totals carried down.
					Orkney and Shetland.
3,386½	16,531	275	10	4	Orkney.
2,227½	100,909	1,681	16	4	Shetland.
5,614	117,440	1,957	6	8	Orkney and Shetland Totals carried down.
					Totals brought down.
48,415½	188,593½	3,143	4	6	East Coast.
5,614	117,440	1,957	6	8	Orkney and Shetland.
54,029½	306,033½	5,100	11	2	Grand Totals for 1906.
84,256½	394,944½	6,582	8	2	Grand Totals for 1905.
...	...	...			Increase in 1906.
30,227	88,911	1,481	17	0	Decrease in 1906.

APPENDIX E.—

CURED FISH EXPORTED.—RETURN showing the Total Quantity of Cured Fish

DISTRICTS.	CURED FISH					
	NUMBER OF BARRELS OF BRANDED AND					
	La. Full.			Full.		
	To Ireland.	To the Continent.	To Places out of Europe.	To Ireland.	To the Continent.	To Places out of Europe.
EAST COAST.						
Eyemouth,	...	...	.	...	953½	...
Leith	...	12,929	...	...	31,142½	...
Anstruther.	...	...	...	...	...	...
Montrose,	...	...	...	...	270	...
Stonehaven,	...	...	...	...	1	...
Aberdeen	...	598½	...	...	7,851	...
Peterhead	...	455	...	...	4,747	...
Fraserburgh,	...	1,136	...	...	5,790	...
Banff,	...	..	...	...	...	...
Buckie,	...	...	...	...	...	...
Findhorn,	...	...	...	...	35	...
Cromarty,	...	...	...	...	...	...
Helmsdale,	...	...	...	...	384	...
Lybster,	...	...	...	...	181	...
Wick,	...	241½	...	...	1,642½	...
East Coast Totals carried down,	...	15,360	...	...	52,997½	...
Orkney and Shetland.						
Orkney,	...	1,694½	...	...	2,766	...
Shetland,	...	33,831	...	...	5,656½	...
Orkney and Shetland Totals carried down.	...	35,525½	...	...	8,422½	...
WEST COAST.						
Stornoway,	...	...	...	...	...	...
Barra,	...	...	...	...	...	...
Loch Broom,	...	...	...	...	...	...
Loch Carron and Skye,	...	...	...	...	...	...
Fort-William,	...	..	...	...	...	...
Campbeltown,	...	..	...	...	...	...
Inveraray,	...	...	...	...	...	...
Rothesay,	...	...	...	...	...	...
Greenock,	...	...	...	..	...	...
Ballantrae,	...	...	...	...	...	...
West Coast Totals carried down,	...	...	...	...	...	...
Totals brought down.						
East Coast,	...	15,360	...	...	52,997½	...
Orkney and Shetland,	...	35,525½	...	...	8,422½	...
West Coast,	...	...	...	...	...	...
Grand Totals for 1906,	...	50,885½	...	...	61,420	...
Grand Totals for 1905,	...	83,608½	...	...	89,411	...
Increase in 1906,	...	...	...	...	...	...
Decrease in 1906,	...	32,723	...	...	27,991	...

No. II.

Exported to Ireland, to the Continent, and to Places out of Europe during the Year 1906.

EXPORTED.

UNBRANDED HERRINGS.

Mat. Full.			Spent.			Mattie.		
To Ireland.	To the Continent.	To Places out of Europe.	To Ireland.	To the Continent.	To Places out of Europe.	To Ireland.	To the Continent.	To Places out of Europe.
								...
...	4,292	...	...	312	...	...	1,546	...
...	14,140½	...	...	3,535½	...	...	8,474	...
...	...	...	...	...	...	...	...	...
...	1,405	...	...	162	...	...	2,434	...
...	237	...	...	144	...	...	1,018	...
...	4,813	...	...	659	...	...	2,850½	...
...	4,046½	...	...	7,895	...	...	9,549½	...
...	9,083	...	...	12,151½	...	...	12,539	...
...	46	...	...	...	...	...	268	...
...	...	...	...	...	...	...	...	...
...	27	...	...	...	...	...	138	...
...	...	...	...	...	...	...	...	...
...	265	...	...	9	...	...	499	...
...	466	...	...	35	...	...	186	...
...	2,760	...	...	2,174½	...	...	4,393½	...
...	41,581	...	...	27,077½	...	...	43,895½	...
...	1,059	...	...	6,134	...	...	2,802½	...
...	21	...	...	9,466	...	...	980½	...
...	1,080	...	...	15,600	...	...	3,783	...
...	...	...	...	...	...	...	...	...
...	...	...	...	..	...	...	...	...
...	...	...	...	...	...	...	...	...
	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...
...	41,581	...	...	27,077½	...	...	43,895½	...
...	1,080	...	...	15,600	...	...	3,783	...
...	...	...	..	...	...	...	...	...
...	42,661	...	...	42,677½	...	...	47,678½	...
...	37,488½	...	...	90,510½	...	...	78,875½	...
...	5,172½	...	...	...	...	...	...	...
...	...	...	...	47,833	...	...	31,197	...

APPENDIX E.—

CURED FISH EXPORTED.—RETURN showing the Total Quantity of Cured Fish

No.	DISTRICTS.	CURED FISH					
		NUMBER OF BARRELS OF BRANDED AND UNBRANDED					
		Total Branded.				Un-	
		To Ireland.	To the Continent.	To Places out of Europe.	Gross Total.	To Ireland.	To the Continent.
	EAST COAST.						
1	Eyemouth, - - - - -	...	7,103½	...	7,103½	...	20,135½
2	Leith, - - - - - -	...	70,221½	...	70,221½	523	252,668
3	Anstruther, - - - - -	...	...	...	...	...	6,732
4	Montrose, - - - - -	...	4,271	...	4,271	...	11,604½
5	Stonehaven, - - - - -	...	1,400	...	1,400	...	640
6	Aberdeen, - - - - -	...	16,772	...	16,772	...	71,102
7	Peterhead, - - - - -	...	26,693	...	26,693	...	127,143½
8	Fraserburgh, - - - - -	...	40,699½	...	40,699½	...	144,437
9	Banff, - - - - - -	...	314	...	314	...	3,358
10	Buckie - - - - - -	...	...	...	...	...	4,180½
11	Findhorn, - - - - -	...	200	...	200	...	7,755
12	Cromarty, - - - - -	...	...	...	...	...	...
13	Helmsdale, - - - - -	...	1,157	...	1,157	...	...
14	Lybster, - - - - -	...	868	...	868	...	14
15	Wick, - - - - - -	...	11,212	...	11,212	...	81,145
	East Coast Totals carried down, - - - -	...	180,911½	...	180,911½	523	730,915
	Orkney and Shetland.						
16	Orkney, - - - - -	...	14,456	...	14,456	...	23,012
17	Shetland, - - - - -	...	49,955	...	49,955	...	422,999½
	Orkney and Shetland Totals carried down, - - - -	...	64,411	...	64,411	...	446,011½
	WEST COAST.						
18	Stornoway, - - - - -	...	...	...	...	...	14,801½
19	Barra, - - - - - -	...	...	...	..	...	24,333
20	Loch Broom, - - - - -	...	...	...	...	...	473
21	Loch Carron and Skye, - -	...	...	...	...	...	...
22	Fort-William, - - - -	...	...	...	...	...	...
23	Campbeltown, - - - -	...	...	...	...	...	...
24	Inveraray, - - - - -	...	...	...	...	...	...
25	Rothesay, - - - - -	...	...	...	...	...	...
26	Greenock, - - - - -	...	...	...	...	10,988½	...
27	Ballantrae, - - - - -	...	...	...	...	...	...
	West Coast Totals carried down, - - - -	...	...	...	...	10,988½	39,607½
	Totals brought down.						
	East Coast, - - - - -	...	180,911½	...	180,911½	523	730,915
	Orkney and Shetland, - -	...	64,411	...	64,411	...	446,011½
	West Coast, - - - - -	...	...	...	...	10,988½	39,607½
	Grand Totals for 1906, - -	...	245,322½	...	245,322½	11,511½	1,216,534
	Grand Totals for 1905, - -	...	379,894	...	379,894	11,114	1,185,353¼
	Increase in 1906, - - -	...	...	...	...	397½	31,180¾
	Decrease in 1906, - - -	...	134,571½	...	134,571½	...	...

No. II.—*continued.*

Exported to Ireland, to the Continent, and to Places out of Europe, during the Year 1906.

EXPORTED.									
HERRINGS.			COD, LING, AND HAKE						
branded.		Total Branded and Un-branded.	Cwts. Dried.				Barrels Cured in Pickle.	Mackerel Cured in Pickle. Barrels.	No.
To Places out of Europe.	Total.		To Ireland.	To the Continent.	To Places out of Europe.	Total.	To the Continent.		
...	20,135½	27,239	...	...	...	...	...	...	1
...	253,191	323,412½	2,511	17,505	6,182	26,198	335	...	2
...	6,732	6,732	...	...	...	...	...	...	3
...	11,604½	15,875½	...	...	...	...	...	...	4
...	640	2,040	...	...	...	...	...	...	5
...	71,102	87,874	...	...	2,920	2,920	...	...	6
...	127,143½	153,836½	...	...	...	...	...	...	7
...	144,437	185,136½	...	...	...	...	...	...	8
...	3,358	3,672	...	...	...	...	...	...	9
...	4,180½	4,180½	...	...	...	...	...	...	10
...	7,755	7,955	...	...	...	...	...	...	11
...	...	...	...	...	...	...	...	...	12
...	...	1,157	...	...	...	...	...	...	13
...	14	882	...	...	...	...	...	...	14
...	81,145	92,357	...	...	...	...	...	...	15
...	731,438	912,349½	2,511	17,505	9,102	29,118	335	...	
...	23,012	37,468	...	3,791	...	3,791	...	...	16
...	422,999½	472,954½	1,136	8,861	360	10,357	...	...	17
...	446,011½	510,422½	1,136	12,652	360	14,148	...	...	
...	14,801½	14,801½	...	...	...	...	...	...	18
...	24,333	24,333	...	...	...	...	...	...	19
...	473	473	...	...	...	...	...	...	20
...	...	...	...	...	...	...	...	...	21
...	...	...	...	...	...	...	...	...	22
...	...	...	230	...	...	230	...	...	23
...	...	...	...	...	...	...	...	...	24
...	...	...	...	...	...	...	...	...	25
9,396	80,384½	80,384½	26,097	...	1,675	27,772	...	1,394	26
...	...	...	...	...	...	...	...	...	27
69,396	119,992	119,992	26,327	...	1,675	28,002	...	1,394	
...	731,438	912,349½	2,511	17,505	9,102	29,118	335	...	
...	446,011½	510,422½	1,136	12,652	360	14,148	...	...	
69,396	119,992	119,992	26,327	...	1,675	28,002	...	1,394	
69,396	1,297,441½	1,542,764	29,974	30,157	11,137	71,268	335	1,394	
67,765	1,264,232¼	1,644,126¼	22,098	25,978	4,748	52,824	439	1,430	
1,631	33,209¼	...	7,876	4,179	6,389	18,444	...	...	
...	...	101,362¼	...	...	...	...	104	36	

APPENDIX E.—

STATEMENT showing the Ports or Places to which the Herrings

No.	DISTRICTS	BARRELS OF HERRINGS					
		To Russia.					
		Helsingfors.	Wyborg.	St Petersburg.	Revel.	Port Baltic.	Riga.
	EAST COAST.						
1	Eyemouth,	...	2,280	...	...	...	...
2	Leith,	...	...	14,220	...	...	27,217
3	Anstruther,	...	...	...	...	...	...
4	Montrose,	...	1,841	...	...	...	...
5	Stonehaven,	...	...	...	...	...	...
6	Aberdeen,	...	...	2,402	...	...	...
7	Peterhead,	...	11,877½	14,304	...	...	4,466
8	Fraserburgh,	1,200	9,757	13,521	5,371	13,198	...
9	Banff,	...	...	...	...	...	...
10	Buckie,	...	...	...	...	..	...
11	Findhorn,	...	...	...	...	...	...
12	Cromarty,	...	...	...	...	...	...
13	Helmsdale,	...	...	...	...	...	...
14	Lybster,	...	...	...	...	...	...
15	Wick	...	...	1,635½	...	...	2,475½
	East Coast Totals carried down,	1,200	25,755½	46,082½	5,371	13,198	34,158½
	Orkney and Shetland.						
16	Orkney,	...	...	2,105	...	...	...
17	Shetland,	...	...	85,826½	...	...	...
	Orkney and Shetland Totals carried down,	...	...	87,931½	...	...	...
	WEST COAST.						
18	Stornoway,	...	...	1,526	...	...	...
19	Barra,	...	...	22,332½	...	...	2,000½
20	Loch Broom,	...	...	...	...	...	...
21	Loch Carron and Skye,	...	...	...	...	...	...
22	Fort-William,	...	...	...	...	...	...
23	Campbeltown,	...	...	...	...	...	...
24	Inveraray,	...	...	...	...	...	...
25	Rothesay,	...	...	...	...	...	...
26	Greenock,	...	...	...	...	...	...
27	Ballantrae,	...	...	...	...	...	...
	West Coast Totals carried down,	...	...	23,858½	...	...	2,000½
	Totals brought down.						
	East Coast,	1,200	25,755½	46,082½	5,371	13,198	34,158½
	Orkney and Shetland,	...	...	87,931½	...	...	...
	West Coast,	...	...	23,858½	...	...	2,000½
	Grand Totals for 1906,	1,200	25,755½	157,872½	5,371	13,198	36,159
	Grand Totals for 1905,	1,106	25,569	106,216	12,320	11,056½	32,455½
	Increase in 1906,	94	186½	51,656½	...	2,141½	3,703½
	Decrease in 1906,	...	...	...	6,949	...	...

NOTE.—In 1905, 87,974½ Barrels were exported to Archangel. There were none exported to Archangel in 1906.

NOTE.—The Number of Barrels of Cured Herrings exported to American ports was 69,396.

No. III.

Exported to the Continent were Shipped.

EXPORTED.					DISTRICTS.
To Russia.			To Germany.		
Libau.	Odessa.	Total.	Memel.	Königsberg.	
					EAST COAST.
15,219½	...	17,499½	...	...	Eyemouth.
...	...	41,437	...	10,026½	Leith.
...	...	...	...	...	Anstruther.
942	...	2,783	...	2,028	Montrose.
...	...	...	1,417	623	Stonehaven.
30,339½	...	32,741½	...	19,692½	Aberdeen.
38,570½	1,200	70,418	...	57,322½	Peterhead.
34,211	...	77,258	...	36,028½	Fraserburgh.
...	...	...	...	520½	Banff.
1,835	...	1,835	...	2,345½	Buckie.
...	...	...	..	5,868	Findhorn.
...	...	...	...	...	Cromarty.
...	...	...	...	...	Helmsdale.
...	...	...	...	...	Lybster.
25,251	...	29,362	...	22,042	Wick.
146,368½	1,200	273,334	1,417	156,497	East Coast Totals carried down.
					Orkney and Shetland.
...	...	2,105	...	10,920½	Orkney.
37,076	...	122,902½	...	128,386	Shetland.
37,076	...	125,007½	...	139,306½	Orkney and Shetland Totals carried down.
					WEST COAST.
...	...	1,526	...	9,830½	Stornoway.
...	...	24,333	...	...	Barra.
...	...	...	...	...	Loch Broom.
...	...	...	...	...	Loch Carron and Skye
...	...	...	...	...	Fort-William.
...	...	..	...	...	Campbeltown.
...	...	...	...	...	Inveraray.
...	...	...	...	...	Rothesay.
...	...	...	...	...	Greenock.
...	...	...	...	...	Ballantrae.
...	...	25,859	...	9,830½	West Coast Totals carried down.
					Totals brought down.
146,368½	1,200	273,334	1,417	156,497	East Coast.
37,076	...	125,007½	...	139,306½	Orkney and Shetland.
...	...	25,859	...	9,830½	West Coast.
183 444½	1,200	424,200½	1,417	305,634	Grand Totals for 1906.
153,856¾	...	430,554¼	4,771	252,355½	Grand Totals for 1905.
29,587¾	1,200	...	...	53,278½	Increase in 1906.
...	...	6,353¾	3,354	...	Decrease in 1905.

APPENDIX E.—

STATEMENT showing the Ports or Places to which the Herrings

No.	DISTRICTS.	BARRELS OF HERRINGS				
		To Germany.				
		Danzig.	Stettin.	Hamburg.	Bremen.	Total.
	EAST COAST.					
1	Eyemouth,	1,887	7,852½	...	...	9,739½
2	Leith,	28,915½	112,827	126,881	137½	278,787½
3	Anstruther,	6,732	...	...	...	6,732
4	Montrose,	4,544½	2,149	4,371	...	13,092½
5	Stonehaven,	...	...	...	...	2,040
6	Aberdeen,	16,325	2,158½	16,956½	...	55,132½
7	Peterhead,	14,201½	11,894½	...	...	83,418½
8	Fraserburgh,	28,508½	43,341½	...	...	107,878½
9	Banff,	3,151½	...	...	...	3,672
10	Buckie,	...	...	...	...	2,345½
11	Findhorn,	...	...	...	...	5,868
12	Cromarty,	...	...	...	...	...
13	Helmsdale,	1,157	...	...	...	1,157
14	Lybster,	249	633	...	...	882
15	Wick,	22,355½	14,738½	...	...	59,136
	East Coast Totals carried down,	128,027	195,594½	148,208½	137½	629,881½
	Orkney and Shetland.					
16	Orkney,	10,160	14,282½	...	...	35,363
17	Shetland,	53,296	106,799½	58,884½	...	347,366
	Orkney and Shetland Totals carried down,	63,456	121,082	58,884½	...	382,729
	WEST COAST.					
18	Stornoway,	2,851	...	594	...	13,275½
19	Barra,	...	...	...	...	...
20	Loch Broom,	...	...	...	...	...
21	Loch Carron and Skye,	...	...	...	...	...
22	Fort-William,	...	...	...	...	...
23	Campbeltown,	...	...	...	...	...
24	Inveraray,	...	...	...	...	...
25	Rothesay,	...	...	...	...	...
26	Greenock,	...	...	...	...	...
27	Ballantrae,	...	...	...	...	...
	West Coast Totals carried down,	2,851	...	594	...	13,275½
	Totals brought down.					
	East Coast,	128,027	195,594½	148,208½	137½	629,881½
	Orkney and Shetland,	63,456	121,082	58,884½	...	382,729
	West Coast,	2,851	...	594	...	13,275½
	Grand Totals for 1906,	194,334	316,676½	207,687	137½	1,025,886
	Grand Totals for 1905,	178,156½	373,085¾	248,275¾	671	1,057,315½
	Increase in 1906,	16,177½	...	...	...	...
	Decrease in 1906,	...	56,409¼	40,588¾	533½	31,429½

No. III.—*continued.*

Exported to the Continent were Shipped.

EXPORTED.					Total Exported to the Continent	DISTRICTS.
To HOLLAND.				To Sweden and Norway.		
Rotterdam	Amsterdam. (Ghent).	Antwerp	Total.			
						EAST COAST.
...	...	...	...	...	27,239	Eyemouth.
1,996	276	215	2,487	178	322,889½	Leith.
...	...	...	...	...	6,732	Anstruther.
...	...	...	...	...	15,875½	Montrose.
...	...	...	...	...	2,040	Stonehaven.
...	...	...	...	...	87,874	Aberdeen.
...	...	...	...	...	153,836½	Peterhead.
...	...	...	...	...	185,136½	Fraserburgh.
...	..	...	...	...	3,672	Banff.
...	...	...	...	...	4,180½	Buckie.
...	...	...	...	2,087	7,955	Findhorn.
...	...	...	...	...	...	Cromarty.
...	...	...	...	...	1,157	Helmsdale.
...	...	...	...	...	882	Lybster.
...	...	...	...	3,859	92,357	Wick.
1,996	276	215	2,487	6,124	911,826½	East Coast Totals carried down.
						Orkney and Shetland.
...	...	...	...	...	37,468	Orkney.
...	...	...	...	2,686	472,954½	Shetland.
...	...	...	...	2,686	510,422½	Orkney and Shetland Totals carried down.
						WEST COAST.
...	...	...	...	...	14,801½	Stornoway.
...	...	...	...	...	24,333	Barra.
...	...	...	...	473	473	Loch Broom.
...	...	...	...	...	...	Loch Carron and Skye.
...	...	...	...	...	...	Fort-William.
...	...	...	...	...	...	Campbeltown.
...	...	...	...	...	...	Inveraray.
...	.	...	...	...	...	Rothesay.
...	...	...	...	...	...	Greenock.
...	...	...	...	...	...	Ballantrae.
...	...	...	...	473	39,607½	West Coast Totals carried down,
						Totals brought down.
1,996	276	215	2,487	6,124	911,826½	East Coast.
...	...	...	...	2,686	510,422½	Orkney and Shetland.
...	...	...	...	473	39,607½	West Coast.
1,996	276	215	2,487	9,283	1,461,856½	Grand Totals for 1906.
2,354½	...	303	2,657½	74,720	1,565,247¼	Grand Totals for 1905.
...	276	...	...	...	...	Increase in 1906.
358½	...	88	170½	65,437	103,390¾	Decrease in 1906.

APPENDIX E.—

VALUE OF CURED FISH.—RETURN showing the estimated Value
ring the

DISTRICTS.	VALUE OF CURED HERRINGS BRANDED.					
	La. Full.	Full.	Mat. Full.	Spent.	Mattie.	Total Branded.
EAST COAST.	£	£	£	£	£	£
Eyemouth, ...	...	11,999	21,564	1,470	10,210	45,243
Leith, ...	355	...	...	...	...	355
Anstruther, ...	...	1,955	2,313	119	185	4,572
Montrose, ...	194	2,670	2,386	237	3,993	9,480
Stonehaven, ...	...	501	390	165	1,539	2,595
Aberdeen, ...	1,131	10,005	7,965	1,277	4,940	25,318
Peterhead, ...	9,357	34,310	8,036	14,652	18,164	84,519
Fraserburgh, ...	7,741	28,121	13,334	15,879	20,467	85,542
Banff, ...	...	440	580	213	843	2,076
Buckie, ...	...	437	425	115	331	1,308
Findhorn, ...	...	162	373	47	516	1,098
Cromarty, ...	...	...	...	...	...	...
Helmsdale, ...	...	...	...	...	396	396
Lybster, ...	...	220	863	59	236	1,378
Wick, ...	2,791	8,969	5,056	4,005	5,994	26,815
East Coast Totals carried down, . . .	21,569	99,789	63,285	38,238	67,814	290,695
Orkney and Shetland.						
Orkney, ...	3,362	5,776	2,078	7,782	5,099	24,097
Shetland, ...	136,581	21,523	45	17,563	3,118	178,830
Orkney and Shetland Totals carried down, . .	139,943	27,299	2,123	25,345	8,217	202,927
WEST COAST.						
Stornoway, ...	...	...	...	...	...	...
Barra, ...	...	...	...	...	...	...
Loch Broom, ...	...	...	...	...	...	...
Loch Carron and Skye, . .	...	...	...	...	...	...
Fort-William, ...	...	...	...	...	...	...
Campbeltown, ...	...	...	...	...	...	...
Inveraray, ...	...	...	...	...	...	...
Rothesay, ...	...	...	...	...	...	...
Greenock, ...	...	...	...	...	...	...
Ballantrae, ...	...	...	...	...	...	...
West Coast Totals carried down, . . .	...	...	...	...	...	...
Totals brought down.						
East Coast, ...	21,569	99,789	63,285	38,238	67,814	290,695
Orkney and Shetland, . .	139,943	27,299	2,123	25,345	8,217	202,927
West Coast, ...	...	...	...	...	...	...
Grand Totals for 1906, . .	161,512	127,088	65,408	63,583	76,031	493,622
Grand Totals for 1905, . .	124,460	130,870	51,767	84,088	87,920	479,105
Increase in 1906, . . .	37,052	...	13,641	...	...	14,517
Decrease in 1906, . . .	...	3,782	...	20,505	11,889	...

No. IV.

of Cured Herrings, Branded and Unbranded, as well as of Cured Cod, &c., Year 1906.

Value of Cured Herrings Unbranded.	Grand Total Value of Cured Herrings.	VALUE OF CURED COD, LING, &c.				Grand Total Value of Cured Fish.	DISTRICTS.
		Dried.	Pickled.	Smoked.	Total.		
£	£	£	£	£	£	£	**EAST COAST.**
117,998	163,241	...	...	3,460	3,460	166,701	Eyemouth.
800	1,155	...	...	1,750	1,750	2,905	Leith.
18,828	23,400	3,411	...	420	3,831	27,231	Anstruther.
12,275	21,755	325	...	1,176	1,501	23,256	Montrose.
9,013	11,608	150	...	4,565	4,715	16,323	Stonehaven.
223,777	249,095	80,380	1,466	607,127	688,973	938,068	Aberdeen.
250,155	334,674	249	...	4,266	4,515	339,189	Peterhead.
245,352	330,894	530	135	3,163	3,828	334,722	Fraserburgh.
8,264	10,340	...	...	7,753	7,753	18,093	Banff.
11,955	13,263	45	146	1,801	1,992	15,255	Buckie.
11,385	12,483	...	...	2,533	2,533	15,016	Findhorn.
...	...	59	...	498	557	557	Cromarty.
255	651	...	...	...	...	651	Helmsdale.
1,768	3,146	...	129	45	174	3,320	Lybster.
126,566	153,381	1,924	1,632	810	4,366	157,747	Wick.
1,038,391	1,329,086	87,073	3,508	639,367	729,948	2,059,034	East Coast Totals carried down.
							Orkney and Shetland.
63,798	87,895	33,424	...	486	33,910	121,805	Orkney.
718,945	897,775	11,700	8	...	11,708	909,483	Shetland.
782,743	985,670	45,124	8	486	45,618	1,031,288	Orkney and Shetland Totals carried down.
							WEST COAST.
77,801	77,801	6,406	1,896	2,152	10,454	88,255	Stornoway.
110,169	110,169	665	...	...	665	110,834	Barra.
5,648	5,648	...	...	...	...	5,648	Loch Broom.
762	762	37	...	...	37	799	Loch Carron and Skye.
305	305	279	...	...	279	584	Fort-William.
336	336	441	...	...	441	777	Campbeltown.
2,756	2,756	...	...	...	...	2,756	Inveraray.
1,207	1,207	...	...	...	...	1,207	Rothesay.
31,431	31,431	...	...	...	...	31,431	Greenock.
171	171	...	...	...	...	171	Ballantrae
230,586	230,586	7,828	1,896	2,152	11,876	242,462	West Coast Totals carried down
							Totals brought down.
1,038,391	1,329,086	87,073	3,508	639,367	729,948	2,059,034	East Coast.
782,743	985,670	45,124	8	486	45,618	1,031,288	Orkney and Shetland.
230,586	230,586	7,828	1,896	2,152	11,876	242,462	West Coast.
2,051,720	2,545,342	140,025	5,412	642,005	787,442	3,332,784	Grand Totals for 1906.
1,750,309	2,229,414	125,387	2,991	655,152	783,530	3,012,944	Grand Totals for 1905.
301,411	315,928	14,638	2,421	...	3,912	319,840	Increase in 1906.
...	...	...	...	13,147	...	...	Decrease in 1906.

APPENDIX E.—

RETURN showing, under each of the Crown Brands, the Number of Barrels of
Districts for Inspection with a view to Branding if in accordance with
the Brand was Refused, and the

DISTRICT.	LA. FULL BRAND.			FULL BRAND.			MAT. FULL BRAND.		
	Barrels pre-sented.	Barrels refused Brand.		Barrels pre-sented.	Barrels refused Brand.		Barrels pre-sented.	Barrels refused Brand.	
		Num-ber.	Per cent.		Num-ber.	Per cent.		Num-ber.	Per cent.
Eyemouth	–	–	–	7,195½	53	·73	14,455½	432	2·98
Leith	237½	–	–	–	–	–	–	–	–
Anstruther	–	–	–	1,294	177	13·68	1,659	257	15·49
Montrose	107½	–	–	1,812½	287	15·83	2,454½	864	35·20
Stonehaven	–	–	–	272	1	–	361	124	34·6
Aberdeen	580½	–	–	5,589	180½	3·22	5 650	822½	14·54
Peterhead	5,120	62	1·21	19,273	473	2·45	5,642½	458	8·12
Fraserburgh . . .	4,363½	2	·04	16,579	509	3·07	9,482½	286	3·01
Banff	–	–	–	356	97	27·24	456	69	15·13
Buckie	–		–	265½	12	4·52	399	129	32·33
Findhorn	–	–	–	110	15	13·63	463½	226½	48·86
Helmsdale			–	384	–	–	265	–	–
Lybster	–	–	–	122	–	–	575	–	–
Wick	1,423½	28	1·9	5,134½	151½	2·9	3,548½	178	5·0
Orkney	1,867½	–	–	3,644	57	1·56	1,475½	90	6·10
Shetland	73,696½	596	·8	13,662	1,363	9·96	97½	71	72·82
Totals for 1906 .	87,396½	688	·79	75,693	3,376	4·46	46,985	4,007	·85
Totals for 1905 . .	86,369½	1,269	1·47	94,938	3,776	3·98	43 158½	2,498	5·79
Increase in 1906 .	1,027	–	–	–	–	·48	3,826½	1,509	–
Decrease in 1906 .	–	581	·68	19,245	400	–	–	–	4·94

No. V.

Cured Herrings presented, during 1906, to the Officers of the various Fishery
the Board's Regulations, the Number and Percentage in respect of which
Principal Grounds of Refusal.

SPENT BRAND.			MATTIE BRAND.			TOTAL.			Principal Grounds of Refusal.
Barrels presented.	Barrels refused Brand. Number.	Barrels refused Brand. Per cent.	Barrels presented.	Barrels refused Brand. Number.	Barrels refused Brand. Per cent.	Barrels presented.	Barrels refused Brand. Number.	Barrels refused Brand. Per cent.	
1,045½	–	–	7,154	207	2·89	29,850½	692	2·31	Torn fish and defective cure.
-	–	–	–	–	–	237½	–	–	
96	1	1·04	167	30	17·96	3,216	465	14·46	Defective selection and inferior fish.
186	–	–	2,834	81	2·85	7,394½	1,232	16·66	Soft fish of inferior quality.
144	–	–	1,062	–	–	1,839	125	6·8	For fish "not full."
1,110	–	–	4 103½	696½	16·96	17 033	1,699½	9·9	Excess of torn fish.
11 828½	337	2·85	13 883½	909	6·55	55,747½	2,239	4·02	Defective cure ; inferior quality.
13,326½	361	2·70	15,045½	425	2·82	58,797*	1 58	2·69	Defective selection ; torn fish.
180	3	1·66	655	30	4·58	1,647	199	12·08	Do. do.
104	8	7·69	280½	44	15·71	1,049	193	18·39	Do. do.
43	4	9·30	389½	27	6·93	1,006	272½	27·08	Defective cure and selection.
9	–	–	499	–	–	1,157	–	–	
49½	–	–	290½	109	37·5	1,037	109	10·5	
3,051¼	14	·45	4,726	115	2·4	17,884	486½	2·7	
6.332½	28	·04	3,520½	134	3·80	16,840	309	1·83	Inferior quality, torn fish, &c.
13 255½	–	–	2,745½	518	18·87	103,457	2,548	2·46	Defective selection.
50,761½	756	1·49	57,356	3,325½	5·79	318,192	12,152½	3·82	
95,831½	2,061	2·15	90,172	5,915½	6·56	410,469½	15,519½	3·78	
–	–	–	–	–	–	–	–	·04	
45,070	1,305	·66	32,816	2,590	·77	92,277½	3,367	–	

* Includes 6 barrels used in filling up slackly-filled barrels.

APPENDIX F.—

PERSONS EMPLOYED.—RETURN showing the Total Number of
branches of the Sea Fisheries

No.	DISTRICTS.	Fishermen and Boys (resident and non-resident).	Fishmongers.	Hawkers of Herring and other Fish.	Fishcurers and Dealers in Fresh Fish.	Coopers.	Gutters and Packers.	Clerks.	Carters and Labourers.
	EAST COAST.								
1	Eyemouth, . . .	612	1	12	20	57	364	2	39
2	Leith, ...	1,799	648	487	25	51	87	60	72
3	Anstruther, . . .	2,000	17	51	26	55	273	3	50
4	Montrose, . . .	1,138	140	445	25	36	446	16	80
5	Stonehaven, . . .	256	6	40	6	16	120	2	17
6	Aberdeen, . . .	2,904	319	360	212	198	2,656	284	1,662
7	Peterhead, . . .	1,198	9	111	85	538	1,439	26	231
8	Fraserburgh, . . .	1,689	4	156	77	504	1,210	82	470
9	Banff, ...	1,324	1	115	19	70	441	2	24
10	Buckie, ...	2,688	...	130	15	100	1,031	4	20
11	Findhorn, . . .	1,431	21	190	15	101	692	9	27
12	Cromarty, . . .	726	...	46	3	2	237	...	2
13	Helmsdale, . . .	436	...	84	12	29	165	2	9
14	Lybster, ...	326	2	4	5	38	240	...	4
15	Wick, ...	2,268	19	130	78	413	1,258	33	200
	East Coast Totals carried down, . .	20,795	1,187	2,361	623	2,208	10,659	525	2,907
	Orkney and Shetland.								
16	Orkney, ...	1,235	16	11	13	41	323	2	88
17	Shetland, . . .	5,565	...	12	49	169	2,132	36	319
	Orkney and Shetland Totals carried down,	6,800	16	23	62	210	2,455	38	407
	WEST COAST.								
18	Stornoway, . . .	4,113	4	30	46	96	2,519	12	162
19	Barra, ...	965	...	...	12	5	748	...	55
20	Loch Broom, . . .	1,235	...	5	7	4	196	2	13
21	Loch Carron and Skye, .	1,433	...	...	9	3	45	...	6
22	Fort-William, . . .	585	14	23	6	2	6	1	2
23	Campbeltown, . .	752	5	30	15	2	21	3	8
24	Inveraray, . . .	829	1	9	20	...	117	...	13
25	Rothesay, . . .	247	22	33	6	...	53	3	16
26	Greenock, . . .	398	900	861	34	26	338	115	300
27	Ballantrae, . . .	704	26	121	10	...	...	19	105
	West Coast Totals carried down, . .	11,261	972	1,112	165	138	4,043	155	680
	Totals brought down.								
	East Coast, ...	20,795	1,187	2,361	623	2,208	10,659	525	2,907
	Orkney and Shetland, .	6,800	16	23	62	210	2,455	38	407
	West Coast, ...	11,261	972	1,112	165	138	4,043	155	680
	Grand Totals for 1906, .	38,856	2,175	3,496	*850	2,556	17,157	718	3,994
	Grand Totals for 1905, .	36,158	2,167	3,563	824	2,403	17,065	689	3,890
	Increase in 1906, . .	2,698	8	...	26	153	92	29	104
	Decrease in 1906, . .	...	...	67	...	...	...	...	...

*Of these it is estimated that 668 were engaged in herring curing, and 182 in the white fish trade.

No. I.

Persons employed in each District in connection with the various during the Year 1906.

Boxmakers.	Boat Builders.	Persons making and mending Nets.	Persons manufacturing Barrel Staves.	Persons employed on board Vessels Curing, Exporting, and Carrying Herring and other Fish.		Persons employed on board Vessels importing Salt, Stave Wood, and Hoops.		Total Persons employed.	DISTRICTS.
				British.	Foreign.	British.	Foreign.		
									EAST COAST.
...	18	...	...	315	135	165	26	1,766	Eyemouth.
28	37	355	...	1,745	...	93	12	5,499	Leith.
...	47	140	16	64	28	58	75	2,903	Anstruther.
6	40	4	13	67	50	5	29	2,540	Montrose.
...	2	40	1	9	8	12	...	535	Stonehaven.
80	2,094	280	20	896	264	252	400	12,881	Aberdeen.
8	52	214	18	620	694	279	315	5,837	Peterhead.
4	70	...	8	1,177	783	401	298	6,933	Fraserburgh.
...	40	...	...	67	15	25	...	2,143	Banff.
...	110	98	...	107	28	37	12	4,380	Buckie.
2	31	38	26	82	42	22	12	2,741	Findhorn.
..	4	...	2	3	...	...	...	1,025	Cromarty.
...	3	..	2	51	6	29	10	838	Helmsdale.
...	...	...	...	46	4	18	5	692	Lybster.
4	41	...	10	506	432	190	233	5,815	Wick.
132	2,589	1,169	116	5,755	2,489	1,586	1,427	56,528	East Coast Totals carried down.
									Orkney and Shetland.
...	23	...	...	160	138	213	32	2,295	Orkney.
...	46	...	...	1,463	1,770	350	68	11,979	Shetland.
...	69	...	...	1,623	1,908	563	100	14,274	Orkney and Shetland Totals carried down.
									WEST COAST.
2	32	1	12	340	60	22	59	7,510	Stornoway.
...	6	...	...	212	101	59	...	2,163	Barra.
...	10	...	...	...	4	20	...	1,496	Loch Broom.
...	18	...	...	31	...	8	...	1,553	Loch Carron and Skye.
...	3	...	...	164	...	7	...	813	Fort-William.
...	9	62	...	90	...	3	...	1,000	Campbeltown.
...	18	...	...	50	...	4	...	1,061	Inveraray.
...	9	...	...	77	...	2	...	468	Rothesay.
...	362	544	...	500	...	40	...	4,418	Greenock.
...	11	...	...	25	...	...	...	1,021	Ballantrae.
2	478	607	12	1,489	165	165	59	21,503	West Coast Totals carried down.
									Totals brought down.
132	2,589	1,169	116	5,755	2,489	1,586	1,427	56,528	East Coast.
...	69	...	...	1,623	1,908	563	100	14,274	Orkney and Shetland.
2	478	607	12	1,489	165	165	59	21,503	West Coast.
134	3,136	1,776	128	8,867	4,562	2,314	1,586	92,305	Grand Totals for 1906
156	2,955	1,543	115	7,716	5,465	2,064	1,428	88,201	Grand Totals for 1905
...	181	233	13	1,151	...	250	158	4,104	Increase in 1906.
22	...	...	...	...	903	...	...	...	Decrease in 1906.

APPENDIX F.—

RETURN, by Districts, of the Tonnage of Shipping, and of the Number of Seamen, engaged distinguishing those employed in Importing Stave Wood and Hoops, in importing Salt, separating British from Foreign Tonnage and Men.

No.	DISTRICTS.	TONNAGE											
		Importing Stave Wood and Hoops for the Fisheries.				Importing Salt for the Fisheries.				Carrying Herrings or other Fish Coastwise.			
		British.		Foreign.		British.		Foreign.		British.		Foreign.	
		Tons.	Men.	Tons.	Men.	Tons.	Men.	Tons.	Men.	Tons.	Men.	Tons.	Men.
	EAST COAST.												
1	Eyemouth,	...	...	508	26	2,794	165	...	...	3,531	315	...	...
2	Leith,	950	73	198	12	453	20	...	...	1,076	64	...	...
3	Anstruther,	...	...	703	45	580	58	699	30	628	64	...	...
4	Montrose,	...	...	133	7	85	5	581	22	566	40	...	...
5	Stonehaven,	...	...	...	...	320	12	...	...	160	9	...	...
6	Aberdeen,	1,530	90	3,416	196	3,257	162	4,041	204	11,777	740	...	...
7	Peterhead,	819	28	6,685	236	5,121	251	1,586	79	11,314	573	1256	76
8	Fraserburgh,	897	35	6,871	269	7,985	366	650	29	12,957	1,075	2562	160
9	Banff,	...	...	...	...	455	25	...	...	1,054	64	...	...
10	Buckie,	60	6	248	12	605	31	...	...	1,649	104	68	9
11	Findhorn,	93	8	150	8	288	14	65	4	1,589	82	...	...
12	Cromarty,	...	...	...	...	...	...	...	...	30	3	...	...
13	Helmsdale,	116	20	248	10	65	9	...	...	462	51	...	...
14	Lybster,	164	14	124	5	95	4	...	...	610	46	...	...
15	Wick,	76	8	4,074	156	3,268	182	1,726	77	5,643	454	484	20
	East Coast Totals carried down,	4,705	282	23,358	982	25,371	1,304	9,348	445	53,046	3,684	4370	265
	Orkney and Shetland.												
16	Orkney,	110	8	388	26	2,435	205	98	6	1,076	105	...	...
17	Shetland,	795	52	1,590	49	6,508	298	286	19	16,763	1,054	1052	61
	Orkney and Shetland Totals carried down,	905	60	1,978	75	8,943	503	384	25	17,839	1,159	1052	61
	WEST COAST.												
18	Stornoway,	118	6	350	18	320	16	815	41	6,033	315	...	...
19	Barra,	...	...	...	...	1,050	59	...	...	3,448	193	...	...
20	Loch Broom,	20	4	...	...	120	16	...	...	...	...	...	...
21	Loch Carron and Skye,	...	...	...	...	155	8	...	...	140	7	...	...
22	Fort William,	...	...	...	...	104	7	...	...	3,196	161	...	...
23	Campbeltown,	...	...	...	...	50	3	...	...	1,382	70	...	...
24	Inveraray,	...	...	...	...	70	4	...	...	983	50	...	...
25	Rothesay,	...	...	...	...	25	2	...	...	1,465	77	...	...
26	Greenock,	...	...	...	...	780	40	...	...	590	30	...	...
27	Ballantrae,	...	...	...	...	...	...	...	...	517	25	...	...
	West Coast Totals carried down,	138	10	350	18	2,674	155	815	41	17,754	928	...	...
	Totals brought down.												
	East Coast,	4,705	282	23,358	982	25,371	1,304	9,348	445	53,046	3,684	4370	265
	Orkney and Shetland,	905	60	1,978	75	8,943	503	384	25	17,839	1,159	1052	61
	West Coast,	138	10	350	18	2,674	155	815	41	17,754	928	...	...
	Grand Totals for 1906	5,748	352	25,686	1075	36,988	1,962	10,547	511	88,639	5,771	5422	326
	Grand Totals for 1905,	5,246	323	22,802	1042	33,793	1,741	8,656	386	78,529	4,910	8429	479
	Increase in 1906,	502	29	2,884	33	3,195	221	1,891	125	10,110	861	...	...
	Decrease in 1906,	...	...	...	...	...	...	...	...	...	...	3007	153

No. II.

in the Trade of the Herring and Cod and Ling Fisheries of Scotland in the Year 1906; in Carrying Herrings or Cod Fish Coastwise, and in Exporting them abroad; and

AND MEN.

Exported Herrings or Cod Fish.				Total.				Grand Total.		No.
British.		Foreign.		British.		Foreign.				
Tons.	Men.	Tons.	Men.	Tons.	Men.	Tons.	Men.	Tons.	Men.	
...	...	2,278	135	6,325	480	2,786	161	9,111	641	1
33,683	1,681	...	...	36,162	1,838	198	12	36,360	1,850	2
...	...	590	28	1,208	122	1,992	103	3,200	225	3
512	27	857	50	1,163	72	1,571	79	2,734	151	4
...	...	277	8	480	21	277	8	757	29	5
3,846	156	4,720	264	20,410	1,148	12,177	664	32,587	1,812	6
956	47	11,805	618	18,210	899	21,332	1,009	39,542	1,908	7
2,505	102	13,646	623	24,344	1,578	23,729	1,081	48,073	2,659	8
51	3	297	15	1,560	92	297	15	1,857	107	9
51	3	298	19	2,365	144	614	40	2,979	184	10
...	...	795	42	1,970	104	1,010	54	2,980	158	11
...	...	...	...	30	3	...	...	30	3	12
...	...	184	6	643	80	432	16	1,075	96	13
...	...	88	4	869	64	212	9	1,081	73	14
1,123	52	7,099	383	10,110	696	13,383	636	23,493	1,332	15
42,727	2,071	42,934	2,195	125,849	7,341	80,010	3,887	205,859	11,228	
900	55	2,716	138	4,521	373	3,202	170	7,723	543	16
5,717	409	33,409	1,648	29,783	1,813	36,337	1,777	66,120	3,590	17
6,617	464	36,125	1,786	34,304	2,186	39,539	1,947	73,843	4,133	
60	4	1,146	60	6,531	341	2,311	119	8,842	460	18
275	13	1,753	101	4,773	265	1,753	101	6,526	366	19
...	...	47	4	140	20	47	4	187	24	20
...	...	...	...	295	15	...	...	295	15	21
...	...	...	...	3,300	168	...	...	3,300	168	22
12	20	...	...	1,444	93	...	...	1,444	93	23
...	...	...	...	1,053	54	...	...	1,053	54	24
...	...	...	...	1,490	79	...	...	1,490	79	25
9,419	470	...	...	10,789	540	...	...	10,789	540	26
...	...	...	...	517	25	...	...	517	25	27
9,766	507	2,946	165	30,332	1,600	4,111	224	34,443	1,824	
42,727	2,071	42,934	2,195	125,849	7,341	80,010	3,887	205,859	11,228	
6,617	464	36,125	1,786	34,304	2,186	39,539	1,947	73,843	4,133	
9,766	507	2,946	165	30,332	1,600	4,111	224	34,443	1,824	
59,110	3,042	82,005	4,146	190,485	11,127	123,660	6,058	314,145	17,185	
49,153	2,553	97,799	4,881	166,721	9,527	137,686	6,788	304,407	16,315	
9,957	489	...	...	23,764	1,600	...	...	9,738	870	
...	...	15,794	735	...	...	14,026	730	...	...	

APPENDIX F.—No. III.

FISHERY STATISTICS.—RETURN, by Districts, of the Number of Lives lost in connection with the Sea Fisheries of Scotland, and the manner in which the Casualties happened; the Number of Boats totally wrecked, and the Value thereof; the Number of Boats damaged, and the Amount of Damage; and the Loss on Nets and other Fishing Material lost or damaged, in the Year 1906.

No.	DISTRICTS.	Lives Lost.							Boats totally Wrecked and Value thereof.		Boats Damaged and Amount of Damage.		Loss on Boats Totally Wrecked or Damaged.	Loss on Nets and other Fishing Material Lost or Damaged.	Total Loss on Boats, Nets, &c., Lost or Damaged.	No.
		Through foundering at Sea. 1	In taking Harbours. 2	In Collisions. 3	Washed Overboard. 4	Falling Overboard. 5	Knocked Overboard or killed by Sail, &c. 6	Total. 7	Number. 8	Value. 9	Number. 10	Amount of Damage. 11	12	13	14	
	EAST COAST.									£		£	£	£	£	
1	Eyemouth,	.	.	.	.	.	1	1	.	.	1	40	40	3,270	3,310	1
2	Leith,	.	.	.	.	.	.	.	3	150	2	1,250	1,400	6,395	7,795	2
3	Anstruther,	.	.	.	1	2	1	4	1	550	10	220	770	1,474	2,244	3
4	Montrose,	3	.	.	2	.	2	7	3	453	21	2,192	2,645	2,515	5,160	4
5	Stonehaven.	.	.	.	.	.	.	.	.	.	7	80	80	300	380	5
6	Aberdeen,	3	.	.	2	3	2	10	5	14,050	550	14,843	28,893	29,120	58,013	6
7	Peterhead,	.	.	.	1	.	.	1	.	.	38	678	678	2,505	3,183	7
8	Fraserburgh,	4	.	3	.	1	.	8	3	520	28	520	1,050	1,570	2,620	8
9	Banff,	.	.	.	.	.	.	.	1	160	4	90	250	404	654	9
10	Buckie,	.	.	.	1	7	.	8	5	1,690	11	300	1,990	7,350	9,340	10
11	Findhorn,	.	.	.	.	2	2	4	3	1,050	12	420	1,470	1,120	2,590	11
12	Cromarty,	.	2	.	.	.	.	.	1	12	6	44	56	394	450	12
13	Helmsdale,	2	.	.	.	.	.	4	2	24	17	692	716	831	1,547	13
14	Lybster,	.	.	.	.	.	.	.	1	40	.	.	40	129	129	14
15	Wick,	.	.	.	.	1	.	1	1	150	2	10	160	1,754	1,914	15
	East Coast Totals carried down	12	2		7	16	8	48	29	18,859	709	21,379	40,238	59,131	99,369	

	Orkney and Shetland.															
16	Orkney,	2	.	.	.	.	.	2	2	10	.	.	10	63	73	16
17	Shetland,	.	.	.	.	3	.	3	4	270	7	210	480	625	1,105	17
	Orkney and Shetland Totals carried down,	2	.	.	.	3	.	5	6	280	7	210	490	688	1,178	
	WEST COAST.															
18	Stornoway,	4	.	.	.	1	.	5	6	285	43	362	647	2,601	3,248	18
19	Barra,	3	.	.	.	.	.	3	3	122	.	.	122	261	383	19
20	Loch Broom,	2	.	.	.	.	.	2	1	10	30	90	100	135	235	20
21	Loch Carron and Skye,	3	.	.	.	.	.	3	1	6	3	8	14	220	234	21
22	Fort-William,	.	.	.	.	.	.	.	.	.	6	9	9	73	82	22
23	Campbeltown,	.	.	.	.	.	.	.	1	25	.	.	25	349	374	23
24	Inveraray,	.	.	.	.	.	.	.	.	.	1	5	5	124	129	24
25	Rothesay,	.	.	.	.	.	.	.	.	.	1	10	10	22	32	25
26	Greenock,	.	.	.	.	.	.	.	.	.	.	.	.	36	36	26
27	Ballantrae,	2	1	.	.	.	.	3	1	80	6	35	115	309	424	27
	West Coast Totals carried down,	14	1	.	.	1	.	16	13	528	90	519	1,047	4,130	5,177	
	Totals brought down.															
	East Coast,	12	2	3	7	16	8	48	29	18,859	709	21,379	40,238	59,131	99,369	
	Orkney and Shetland,	2	.	.	.	3	.	5	6	280	7	210	490	688	1,178	
	West Coast,	14	1	.	.	1	.	16	13	528	90	519	1,047	4,130	5,177	
	Grand Totals for 1906,	28	3	3	7	20	8	69	48	19,667	806	22,108	41,775	63,949	105,724	
	Grand Totals for 1905,	7	10	5	4	16	4	46	47	28,788	790	22,012	50,800	63,674	114,474	
	Increase in 1906,	21	.	.	3	4	4	23	1	.	16	96	.	275	.	
	Decrease in 1906,	.	7	2	.	.	.	.	.	9,121	.	.	9,025	.	8,750	

APPENDIX G.—

RETURN for the Year 1906, showing the Number and Value of Fishing Boats and Trawlers Vessels, and dividing Sailing Vessels into First, Second, and Third Class; with

No.	DISTRICTS.	FISHING BOATS.													
		Propelled by Steam.		Propelled by Sails.										Total.	
				1st Class.				2nd Class.		3rd Class.		Total.			
				45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.					
		No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
	EAST COAST.		£		£		£		£		£		£		£
1	Eyemouth, . . .	.	.	2	1,400	.	.	.	.	.	.	2	1,400	2	1,400
2	Leith, ...	.	.	.	.	.	.	.	.	.	.	.	.	.	.
3	Anstruther, . .	5	12,300	1	700	1	150	3	104	.	.	5	954	10	13,254
4	Montrose, . . .	.	.	.	.	.	.	.	.	1	18	1	18	1	18
5	Stonehaven, . .	.	.	.	.	.	.	4	100	.	.	4	100	4	100
6	Aberdeen, . . .	9	27,000	.	.	.	.	.	.	.	.	.	.	9	27,000
7	Peterhead, . . .	3	7,500	.	.	.	.	.	.	.	.	.	.	3	7,500
8	Fraserburgh, . .	.	.	7	5,150	9	1,390	7	170	34	500	57	7,210	57	7,210
9	Banff, ...	4	10,000	3	2,250	3	570	2	57	7	74	15	2,951	19	12,951
10	Buckie, . . .	26	67,600	2	1,500	.	.	.	.	2	18	4	1,518	30	69,118
11	Findhorn, . . .	3	6,900	.	.	.	.	.	.	.	.	.	.	3	6,900
12	Cromarty, . . .	.	.	.	.	.	.	1	18	3	45	4	63	4	63
13	Helmsdale, . . .	.	.	.	.	.	.	.	.	.	.	.	.	.	.
14	Lybster, . . .	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	Wick, ...	.	.	.	.	.	.	.	.	.	.	.	.	.	.
	East Coast Totals carried down,	50	131,300	15	11,000	13	2,110	17	449	47	655	92	14,214	142	145,514
	Orkney and Shetland.														
16	Orkney, . . .	.	.	.	.	.	.	3	45	17	119	20	164	20	164
17	Shetland, . . .	.	.	.	.	.	.	.	.	36	260	36	260	36	260
	Orkney and Shetland Totals car'd down, .	.	.	.	.	.	.	3	45	53	379	56	424	56	424
	WEST COAST.														
18	Stornoway, . . .	.	.	.	.	.	.	2	40	4	52	6	92	6	92
19	Barra, ...	.	.	.	.	.	.	.	.	.	.	.	.	.	.
20	Loch Broom, .	.	.	.	.	.	.	.	.	.	.	.	.	.	.
21	Loch Carron and Skye,	.	.	.	.	.	.	.	.	4	24	4	24	4	24
22	Fort-William, . .	.	.	.	.	.	.	.	.	1	16	1	16	1	16
23	Campbeltown, . .	.	.	.	.	.	.	3	420	.	.	3	420	3	420
24	Inveraray, . . .	.	.	.	.	.	.	5	720	2	44	7	764	7	764
25	Rothesay, . .	.	.	.	.	.	.	4	355	1	12	5	367	5	367
26	Greenock, . . .	.	.	.	.	.	.	.	.	.	.	.	.	.	.
27	Ballantrae, . . .	.	.	.	.	.	.	2	70	.	.	2	70	2	70
	West Coast Totals carried down, .	.	.	.	.	.	.	16	1,605	12	148	28	1,753	28	1,753
	Totals brought down														
	East Coast, . . .	50	131,300	15	11,000	13	2,110	17	449	47	655	92	14,214	142	145,514
	Orkney and Shetland,	.	.	.	.	.	.	3	45	53	379	56	424	56	424
	West Coast, . .	.	.	.	.	.	.	16	1,605	12	148	28	1,753	28	1,753
	Grand Totals for 1906,	50	131,300	15	11,000	13	2,110	36	2,099	112	1,182	176	16,391	226	147,691
	Grand Totals for 1905 .	7	18,600	14	11,120	4	580	33	1,700	133	1,424	184	14,824	191	33,424
	Increase in 1906, .	43	112,700	1	.	9	1,530	3	399	.	.	.	1,567	35	114,267
	Decrease in 1906, .	.	.	.	120	.	.	.	.	21	242	8		.	.

No. I.

constructed within the boundaries of each District in Scotland, distinguishing Steam from Sailing Remarks as to any Vessels made for use outside the District or outside Scotland.

TRAWLERS.						TOTAL FISHING BOATS AND TRAWLERS.						REMARKS.	No.
Propelled by Steam.		Propelled by Sails.		Total.		Propelled by Steam.		Propelled by Sails		Total.			
No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.		
	£		£		£		£		£		£		
.	.	.	.	.	.	.	.	2	1,400	2	1,400	For use in district.	1
.	.	.	.	.	.	.	.	.	.	.	.		2
.	.	.	.	.	.	5	12,300	5	954	10	13,254	Steam vessels for Peterhead, sailers for district.	3
4	26,500	.	.	4	26,500	4	26,500	1	18	5	26,518	3 trawlers for England, 1 for France.	4
.	.	.	.	.	.	.	.	4	100	4	100	All for district.	5
47	278,200	.	.	47	278,200	56	305,200	.	.	56	305,200	32 for Aberdeen, 12 for other districts. 8 for England, 2 for France, and 2 for Germany.	6
.	.	.	.	.	.	3	7,500	.	.	3	7,500	1 for Peterhead, 2 for Buckie.	7
.	.	.	.	.	.	.	.	57	7,210	57	7,210	For district, Ireland, Shetland, and West Coast.	8
.	.	.	.	.	.	4	10,000	15	2,951	19	12,951	14 for district, 5 for other districts.	9
.	.	.	.	.	.	26	67,600	4	1,518	30	69,118	21 steamers for districts.	10
.	.	.	.	.	.	3	6,900	.	.	3	6,900	All for district.	11
.	.	.	.	.	.	.	.	4	63	4	63	For use in district.	12
.	.	.	.	.	.	.	.	.	.	.	.		13
.	.	.	.	.	.	.	.	.	.	.	.		14
.	.	.	.	.	.	.	.	.	.	.	.		15
51	304,700	.	.	51	304,700	101	436,000	92	14,214	193	450,214		
.	.	.	.	.	.	.	.	20	164	20	164	All for district.	16
.	.	.	.	.	.	.	.	36	260	36	260		17
.	.	.	.	.	.	.	.	56	424	56	424		
.	.	.	.	.	.	.	.	6	92	6	92	All for district.	18
.	.	.	.	.	.	.	.	.	.	.	.		19
.	.	.	.	.	.	.	.	.	.	.	.		20
.	.	.	.	.	.	.	.	4	24	4	24	For district.	21
.	.	.	.	.	.	.	.	1	16	1	16	For Loch Carron district.	22
.	.	.	.	.	.	.	.	3	420	3	420	1 for Ireland, and 2 for district.	23
.	.	.	.	.	.	.	.	7	764	7	764	5 for other districts.	24
.	.	.	.	.	.	.	.	5	367	5	367	3 for other districts.	25
30	183,920	.	.	30	183,920	30	183,920	.	.	30	183,920	1 for Leith, 2 for Germany, 1 for France, 1 for Belgium, the rest for England.	26
.	.	.	.	.	.	.	.	2	70	2	70	For district.	27
30	183,920	.	.	30	183,920	30	183,920	28	1,753	58	185,673		
51	304,700	.	.	51	304,700	101	436,000	92	14,214	193	450,214		
.	.	.	.	.	.	.	.	56	424	56	424		
30	183,920	.	.	30	183,920	30	183,920	28	1,753	58	185,673		
81	488,620	.	.	81	488,620	131	619,920	176	16,391	307	636,311		
32	176,400	.	.	32	176,400	39	195,000	184	14,824	223	209,824		
49 .	312,220 .	. .	. .	49 .	312,220 .	92 .	424,920 .	. 8	1,567 .	8 .	426,487 .		

APPENDIX G.—

RETURN, for the Year 1906, of the Number of Barrels and the Number of Half-
the different kinds of Wood used and the methods of Hooping adopted, with
sumption outside the District, or outside Scotland; and of the Number of

No.	DISTRICTS.	BARRELS AND HALF-							
		Of Ash, Elm, Birch, Alder, &c.		Of Larch.		Of Fir.		Total.	
		Barrels.	Half-Barrels.	Barrels.	Half-Barrels.	Barrels.	Half-Barrels.	Barrels.	Half-Barrels.
	EAST COAST.								
1	Eyemouth, . . .	440	.	.	.	59,621	175	60,061	175
2	Leith, ...	3,500	.	.	.	10,200	14,000	13,700	14,000
3	Anstruther, . . .	28,200	7,720	.	.	15,280	2,000	43,480	9,720
4	Montrose, . . .	4,289	25	.	.	19,208	210	23,497	235
5	Stonehaven, . . .	.	.	.	.	8,580	50	8,580	50
6	Aberdeen, . . .	12,902	60	.	.	260,455	72,809	273,357	72,869
7	Peterhead, . . .	6,340	371	1,530	116	378,289	84,695	386,159	85 182
8	Fraserburgh, . .	.	.	.	.	632,107	83,650	632,107	83,650
9	Banff, ...	.	.	.	.	32,640	6,552	32,640	6,552
10	Buckie, . . .	.	.	.	.	59,029	25,400	59,029	25,400
11	Findhorn, . . .	.	.	.	.	57,486	20,972	57,486	20,972
12	Cromarty, . . .	.	.	.	.	1,225	.	1,225	.
13	Helmsdale, . . .	.	.	.	.	21,360	1,200	21,360	1,200
14	Lybster, . . .	.	.	.	.	22,283	540	22,283	540
15	Wick, ...	.	.	.	.	241,635	50,032	241,635	50,032
	East Coast Totals carried down, . .	55,671	8,176	1,530	116	1,819,398	362,285	1,876,599	370,577
	Orkney and Shetland.								
16	Orkney, . . .	1,265	212	.	.	21,754	7,733	23,019	7,945
17	Shetland, . . .	.	.	.	.	159,150	21,300	159,150	21,300
	Orkney and Shetland Totals carried down	1,265	212	.	.	180,904	29,033	182,169	29,245
	WEST COAST.								
18	Stornoway, . . .	.	.	.	.	34,496	19,828	34,496	19,828
19	Barra, ...	.	.	.	.	.	.	.	.
20	Loch Broom, . .	.	.	.	.	750	230	750	230
21	Loch Carron and Skye,	.	.	.	.	.	.	.	.
22	Fort-William, . .	.	.	.	.	.	.	.	.
23	Campbeltown, . .	.	.	.	.	.	.	.	.
24	Inveraray, . . .	.	.	.	.	.	.	.	.
25	Rothesay, . . .	.	.	.	.	.	.	.	.
26	Greenock, . . .	.	.	.	.	.	2,200	.	2,200
27	Ballantrae, . . .	.	.	.	.	.	.	.	.
	West Coast Totals carried down, . .	.	.	.	.	35,246	22,258	35,246	22,258
	Totals brought down								
	East Coast, . . .	55,671	8,176	1,530	116	1,819,398	362,285	1,876,599	370,577
	Orkney and Shetland, .	1,265	212	.	.	180,904	29,033	182,169	29,245
	West Coast, . . .	.	.	.	.	35,246	22,258	35,246	22,258
	Grand Totals for 1906, .	56,936	8,388	1,530	116	2,035,548	413,576	2,094 014	422,080
	Grand Totals for 1905, .	61,951	4,116	1,931	4,053	1,775,596	410,733	1,839,478	418,902
	Increase in 1906, . .	.	4,272	.	.	259,952	2,843	254,536	3,178
	Decrease in 1906, . .	5,015	.	401	3,937	.	.	.	.

No. II.

Barrels constructed within the boundaries of each District in Scotland, showing Remarks as to the Number of Barrels and Half-Barrels (if any) made for con- Quarter-Cran Basket Measures Branded.

BARRELS CONSTRUCTED.						Number of ¼-cran measures branded.		DISTRICTS.	No.
Hooped entirely with Wood.		Hooped entirely with Iron.		Hooped partly with Wood and partly with Iron.					
Barrels.	Half-Barrels.	Barrels.	Half-Barrels.	Barrels.	Half-Barrels.	Boxes.	Baskets.		
								EAST COAST.	
.	.	.	.	60,061	175	.	.	Eyemouth.	1
.	.	.	.	13,700	14,000	.	12,901	Leith.	2
.	.	.	.	43,480	9,720	.	.	Anstruther.	3
.	.	.	.	23,497	235	.	2,380	Montrose.	4
.	.	.	.	8,580	50	.	.	Stonehaven.	5
.	.	.	.	273.357	72,869	.	9,075	Aberdeen.	6
.	.	.	.	386,159	85,182	.	1,072	Peterhead.	7
.	.	.	.	632,107	83,650	.	2,492	Fraserburgh.	8
.	.	.	.	32,640	6,552	.	.	Banff.	9
.	.	.	.	59,029	25,400	.	.	Buckie.	10
.	.	.	.	57,486	20,972	.	.	Findhorn.	11
.	.	.	.	1,225	.	.	.	Cromarty	12
.	.	.	.	21,360	1,200	.	.	Helmsdale.	13
.	.	.	.	22,283	540	.	.	Lybster.	14
.	.	.	.	241,635	50.032	.	8,946	Wick.	15
.	.	.	.	1,876,599	370,577	.	36,866	East Coast Totals carried down.	
								Orkney and Shetland.	
.	.	.	.	23,019	7,945	.	.	Orkney.	16
.	.	.	.	159,150	21,300	.	.	Shetland.	17
.	.	.	.	182,169	29,245	.	.	Orkney and Shetland Totals carried down.	
								WEST COAST.	
.	.	.	.	34,496	19,828	.	.	Stornoway.	18
.	.	.	.	.	.	.	.	Barra.	19
.	.	.	.	750	230	.	.	Loch Broom.	20
.	.	.	.	.	.	.	.	Loch Carron and Skye.	21
.	.	.	.	.	.	.	.	Fort-William.	22
.	.	.	.	.	.	.	.	Campbeltown.	23
.	.	.	.	.	.	.	.	Inveraray.	24
.	.	.	.	.	.	.	.	Rothesay.	25
.	.	.	.	.	2,200	.	515	Greenock.	26
.	.	.	.	.	.	.	61	Ballantrae.	27
.	.	.	.	35,246	22,258	.	576	West Coast Totals carried down.	
								Totals brought down	
.	.	.	.	1,876,599	370,577	.	36,866	East Coast.	
.	.	.	.	182,169	29,245	.	.	Orkney and Shetland.	
.	.	.	.	35,246	22,258	.	576	West Coast.	
.	.	.	.	2,094,014	422,080	.	37,442	Totals for 1906.	
.	.	717	.	1,838,761	418,902	.	35,520	Totals for 1905.	
.	.	.	.	255,253	3,178	.	1,922	Increase in 1906.	
.	.	717	.	.	.	.	.	Decrease in 1906.	

APPENDIX

REGISTRATION OF FISHING BOATS—RETURN, by Districts, of Fishing
1883, and Sea Fisheries (Scotland)

No.	DISTRICTS.	Applications to Register.				Certificates	
		First Class.	Second Class.	Third Class.	Total.	First Class.	Second Class.
	EAST COAST.						
1	Eyemouth, ...	1	3	...	4	...	...
2	Leith, ...	1	3	...	4	1	3
3	Anstruther, ...	10	4	...	14	10	4
4	Montrose, ...	...	...	...	...	...	...
5	Stonehaven, ...	...	...	...	...	...	...
6	Aberdeen, ...	...	...	...	...	...	...
7	Peterhead, ...	...	...	...	...	...	...
8	Fraserburgh, ...	...	...	...	...	...	...
9	Banff, ...	16	5	2	23	16	5
10	Buckie, ...	...	...	...	...	...	...
11	Findhorn, ...	...	...	...	...	...	...
12	Cromarty, ...	...	1	1	2	...	1
13	Helmsdale, ...	...	7	...	7	...	7
14	Lybster, ...	...	...	...	...	...	...
15	Wick, ...	4	...	3	7	...	...
	East Coast Totals carried down, ...	32	23	6	61	27	20
	Orkney and Shetland.						
16	Orkney, ...	...	...	...	...	...	...
17	Shetland, ...	...	...	...	...	...	...
	Orkney and Shetland Totals carried down, . . .	...	...	...	...	...	...
	WEST COAST.						
18	Stornoway, ...	14	47	11	72	12	38
19	Barra, ...	8	35	12	55	8	35
20	Loch Broom, ...	1	5	3	9	1	5
21	Loch Carron and Skye, .	...	11	15	26	...	11
22	Fort-William, ...	...	9	14	23	...	9
23	Campbeltown, ...	...	17	...	17	...	17
24	Inveraray, ...	...	77	5	82	...	77
25	Rothesay, ...	...	7	7	14	...	7
26	Greenock, ...	...	...	1	1	...	...
27	Ballantrae, ...	...	26	16	42	...	26
	West Coast Totals carried down, ...	23	234	84	341	21	225
	Fishery Cruiser "Minna," .	...	...	...	...	...	...
	,, ,, "Freya," .	...	...	...	...	...	...
	,, ,, "Brenda," .	...	...	...	...	...	...
	,, ,, "Vigilant,"	...	...	...	...	...	...
	H.M.S. "Hussar," . .	...	...	...	...	...	...
	Cruisers' Totals carried down,	...	...	...	...	...	...
	Totals brought down.						
	East Coast, ...	32	23	6	61	27	20
	Orkney and Shetland, . .	...	...	...	...	...	...
	West Coast, ...	23	234	84	341	21	225
	Cruisers, ...	...	...	...	...	...	...
	Grand Totals for 1906, .	55	257	90	402	48	245
	Grand Totals for 1905, .	85	156	89	330	78	149
	Increase in 1906, . . .	...	101	1	72	...	96
	Decrease in 1906, . . .	30	...	...	...	30	...

H.

Boat Proceedings in Scotland in the Year 1906, under Sea Fisheries Acts of 1868 and Amendment Act of 1885.

Issued.		Certificates Examined and Endorsed.				Boats Detained.						No.
Third Class.	Total.	First Class.	Second Class.	Third Class.	Total.	Steam Trawlers.	Other Steam Fishing Vessels.	First Class.	Second Class.	Third Class.	Total.	
...	...	...	...	...	...	...	...	...	...	...	...	1
...	4	3	36	8	47	...	...	...	...	...	...	2
...	14	122	86	2	210	...	...	...	...	...	...	3
...	...	...	...	...	...	...	...	...	...	...	...	4
...	...	...	...	...	...	...	...	...	...	...	...	5
...	...	...	...	...	...	27	3	...	2	...	32	6
...	...	143	36	25	204	...	...	1	4	...	5	7
...	...	294	213	78	585	...	...	...	...	...	...	8
2	23	66	49	45	160	...	...	...	...	...	...	9
...	...	11	3	1	15	...	...	...	4	...	4	10
...	...	...	...	...	...	...	...	...	5	...	5	11
...	2	3	9	34	46	...	...	1	2	2	5	12
...1	7	23	23	10	56	...	...	...	...	...	...	13
...	...	41	11	14	66	...	...	...	...	...	...	14
...	...	128	38	60	226	...	...	...	...	...	...	15
3	50	834	504	277	1,615	27	3	2	17	2	51	
...	...	...	...	7	7	...	...	...	...	...	...	16
...	...	...	...	...	...	1	...	1	5	...	7	17
...	...	...	...	7	7	1	...	1	5	...	7	
8	58	109	354	50	513	...	1	4	1	...	6	18
12	55	18	104	97	219	...	...	...	...	...	...	19
3	9	22	65	192	279	...	...	...	...	...	...	20
15	26	8	260	272	540	...	...	...	...	...	...	21
14	23	7	193	60	260	...	...	...	...	...	...	22
...	17	3	295	44	342	...	...	...	...	...	...	23
5	82	...	235	66	301	...	...	...	...	...	...	24
7	14	...	89	72	161	...	...	...	...	...	...	25
1	1	...	87	22	109	...	...	...	...	...	...	26
16	42	5	238	152	395	...	...	...	...	...	...	27
81	327	172	1,920	1,027	3,119	...	1	4	1	...	6	
...	...	...	...	...	...	22	2	166	25	9	224	
...	...	...	...	...	...	151	8	98	66	3	326	
...	...	...	...	...	...	53	11	51	20	...	135	
...	...	...	...	...	...	...	...	27	16	...	43	
...	...	...	...	...	...	...	...	21	...	...	21	
...	...	...	...	...	...	226	21	363	127	12	749	
3	50	834	504	277	1,615	27	3	2	17	2	51	
...	...	...	...	7	7	1	...	1	5	...	7	
81	327	172	1,920	1,027	3,119	...	1	4	1	...	6	
...	...	...	...	...	...	226	21	363	127	12	749	
84	377	1,006	2,424	1,311	4,741	254	25	370	150	14	813	
83	310	1,303	2,692	1,344	5,339	373	92	309	202	7	983	
1	67	...	...	...	...	...	...	61	...	7	...	
...	...	297	268	33	598	119	67	...	52	...	170	

APPENDIX I.—No. 1.

REPORT BY THE ENGINEERS TO THE FISHERY BOARD ON THE HARBOUR WORKS FOR THE YEAR 1906.

St. Monance.—During the year the East and West Harbour bottoms were levelled and the repairs of the East and West Piers were completed at a cost of £570 0s. 5d., the total cost of the works of deepening and protection being thus £5701 19s. 2d. The boats have had the full use of the harbour since the month of September.

D. & C. STEVENSON.

EDINBURGH, 26*th February* 1907.

APPENDIX I.—No. II.

HARBOUR WORKS.—ACCOUNT of RECEIPTS and PAYMENTS by the Fishery Board for Scotland for Building, Extending, and Repairing PIERS or HARBOURS in Scotland in the year 1906.

Dr.

1906.		£	s.	d.
Jan. 1.	To Balance,	£18,777	6	5
	PARLIAMENTARY GRANTS.			
Mar. 31.	To Grant in aid of Piers or Quays (5 Geo. IV. cap. 64),	3,000	0	0
,,	,, Surplus Herring Brand Fees, 1904,	2,627	0	0
	BANK INTEREST.			
Dec. 31.	To Interest on amount deposited in Bank,	343	12	7
	LOCAL CONTRIBUTIONS.			
Jan. 24.	To Locality's contribution towards additional cost of Pittenweem Harbour Works,	80	19	6
		£24,828	18	6

Cr.

1906.

Dec. 31. By Payments for Harbour Works during the year, viz. :—

Name of Harbour.	Works.			Inspectors' Wages and Expenses.			Engineers' Fees and Travelling Expenses.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Pennan,	...			...			76	11	4	76	11	4
St. Monance,	891	17	10	37	10	7	48	17	0	978	5	5
Pittenweem,	180	19	6	...			...			180	19	6
Avoch,	1,070	11	6	100	8	0	...			1,170	19	6
Sandhaven,	135	15	3	...			...			135	15	3
Crovie,	35	0	0	...			11	15	9	46	15	9
Fraserburgh,	5,000	0	0	...			...			5,000	0	0
Holm, Orkney,	528	9	0	...			...			528	9	0
Totals,	7,842	13	1	137	18	7	137	4	1	8,117	15	9

		£	s.	d.
,,	,, Fishery Board's contribution towards expenses of staff of Col. Gore-Booth, R.E., Consulting Engineer to Scottish Office, to 22nd Dec. 1905,	67	1	11
,,	,, Fishery Board's proportion of cost of clerical staff of Superintendent of Engineering from 23rd December 1905 to 31st March 1906,	13	11	6
,,	,, Remittance to Public Works Loan Board of half-yearly instalments in repayment of loan to Eyemouth Harbour Trustees, for which the Fishery Board for Scotland are guarantors,	437	9	6
,,	,, Balance in hand,	16,192	19	10
		£24,828	18	6

APPENDIX I.—No. III.

BRAND FEES.—ACCOUNT OF THE BRAND FEE REVENUE, THE COST OF COLLECTION, THE SURPLUS, AND THE EXPENDITURE, during the period from 1881 to 1905–06.

Year of Collection. 1	Total Proceeds of Brand Fees. 2	Estimated Cost of Collection.* 3	Surplus or Deficit. 4	Year in which Surplus Voted. 5	Amount Voted. 6	How Disposed of. For Telegraph Guarantees. 7	For Scientific Investigation. 8	For Eyemouth Harbour Loan Guarantee. 9	Transferred to General Harbour Fund.† 10
	£	£	£		£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
10 Years 1881-90 ‡	83,245	56,647	26,598	1882–92	26,860	9,710 14 1	768 1 4	1,824 0 0§	14,557 4 7
1891	4,272	4,721	*449*	1892–93	...	...‖	...	...	...
1892	6,018	4,892	1,126	1893–94	1,126	726 7 7	...	399 12 5	...
1893	7,354	4,748	2,606	1894–95	2,606	925 7 3	...	514 8 8	1,166 4 1
1894	8,747	4,994	3,753	1895–96	3,753	966 0 11	...	507 18 8	2,279 0 5
1895	8,021	5,267	2,754	1896–97	2,754	332 1 0	...	500 18 2	1,921 0 10
1896	7,523	4,988	2,535	1897–98	2,535	288 15 6	..	492 14 6	1,753 10 0
1897	3,594	5,082	*1,488*	1898–99	...	...	...	...	...
1898	10,526	4,902	5,624	1899–1900	5,624	...	...	479 14 6	5,144 5 6
1899	4,831	4,905	*74*	1900–01	...	...	...	...	...
1900	4,874	5,151	*277*	1901–02	...	...	...	...	...
1901	6,423	5,096	1,327	1902–03	1,327	...	...	460 4 6	866 15 6
1902	7,259	5,219	2,040	1903–04	2,040	...	...	453 14 6	1,586 5 6
1903	6,067	5,181	886	1904–05	886	...	...	447 4 6	438 15 6
1904	8,070	5,443	2,627	1905–06	2,627	...	...	440 14 6	2,186 5 6
1905	6,582	5,363	1,219	1906–07	1,219	...	...	437 9 6	781 10 6
Total,	183,406	132,599	50,807	...	53,357	12,949 6 4	768 1 4	6,958 14 5	32,680 17 11

---

* For details see Civil Service Estimates (Class II., Vote for Fishery Board for Scotland).

† To be spent as required.

§ This amount was set aside in the year 1891 as a Reserve Fund only to be drawn upon, in the event of the Brand Fee Surplus in any particular year being insufficient, after defraying Telegraph Guarantees, to meet the liabilities under the Loan Guarantee. In 1892–93, £235 0s. 2d. was paid from this Fund; in 1898-99, £486, 4s. 6d.; in 1900-01, £473, 4s. 6d.; and in 1901-02, £466 14s. 6d., leaving a balance of only £162 16s. 4d. unappropriated.

‡ For details of these years, see 19th or previous Annual Reports.

‖ The amount spent during the year was defrayed by special Parliamentary Grant.

APPENDIX I.—No. IV.

RETURN of the PIERS and HARBOURS Erected or Improved by the FISHERY BOARD for SCOTLAND from 1st January 1883 to 31st December 1906, showing for each undertaking the CONTRIBUTIONS made by the Board, the SUBSCRIPTIONS raised by the Localities (so far as coming within the cognisance of the Board), and the TOTAL EXPENDITURE :—

County.	Pier or Harbour.	Total Contribution by the Board.	Total Contribution by the Locality.	Total Expenditure to 31st December 1906.
		£ s. d.	£ s. d.	£ s. d.
Aberdeen -	*Rosehearty -	1,681 10 11	500 0 0	2,181 10 11
	Pennan - -	1,000 0 0	615 16 3	1,615 16 3
	Collieston -	5,482 0 7	1,618 4 6	7,100 5 1
	†Sandhaven -	738 10 9	300 0 0	1,038 10 9
	Fraserburgh -	5,000 0 0	——	5,000 0 0
Argyll - -	Carsaig, Mull -	5 17 0	——	5 17 0
	Waterfoot, Cantyre	24 0 0	116 14 0	140 14 0
Ayr - -	Dunure - -	462 6 8	500 0 0	962 6 8
Banff - -	†Crovie - -	971 15 9	324 12 6	1,296 8 3
	*Findochty -	9,331 8 9	7,500 0 0	16,831 8 9
	Buckpool -	1,474 18 11	800 0 0	2,274 18 11
	Portknockie .	6,993 16 0	3,500 0 0	10,493 16 0
	Whitehills -	7,315 11 3	3,200 0 0	10,515 11 3
	Sandend - -	432 18 4	577 5 0	1,010 3 4
	Cullen - -	1,400 0 0	600 0 0	2,000 0 0
	Macduff -	1,000 0 0	——	1,000 0 0
Berwick -	Coldingham -	3,000 0 0	10,000 0 0	13,000 0 0
Fife - -	St. Monance -	5,792 5 10	2,269 0 0	8,061 5 10
	Pittenweem -	4,450 0 0	1,809 19 6	6,259 19 6
	St. Andrews -	4,170 2 1	1,339 5 8	5,509 7 9
	Cellardyke -	1,300 0 0	512 8 4	1,812 8 4
Forfar - -	Auchmithie -	4,125 0 0	1,125 0 0	5,250 0 0
Inverness -	Broadford, Skye	7,875 0 0	2,625 0 0	10,500 0 0
Northumberland	Greenshaven -	319 16 1	600 0 0	919 16 1
Nairn - -	Nairn - -	5,587 10 0	1,862 10 0	7,450 0 0
Orkney and Shetland -	†Holm, Orkney	528 9 0	413 0 0	941 9 0
Ross & Cromarty - -	Balintore -	5,805 13 0	1,935 4 5	7,740 17 5
	Rockfield -	10 0 0	5 0 0	15 0 0
	Ness, Lewis -	8,072 6 7	3,000 0 0	11,072 6 7
	Cromarty -	300 0 0	137 13 9	437 13 9
	Avoch - -	1,400 0 0	1,008 13 10	2,408 13 10
Sutherland -	Portnacon -	900 0 0	300 0 0	1,200 0 0
		96,950 17 6	49,095 7 9	146,046 5 3

These harbours were begun by the old Board, but the whole of the payments made towards the works are now given.

† The grants to these harbours have not yet been wholly expended, and at some of them work is still being carried on.

Grants have also been provisionally made to Port Seton, Craigenroan, Rosehearty, Craster, and Stonehaven, amounting in all to £14,850.

APPENDIX K.—No. 1.

LOANS TO FISHERMEN.—STATEMENT showing the NUMBER OF LOANS CARRIED OUT in each Crofting Fishery District, the AMOUNT paid over, and the TOTAL INSTALMENTS RECEIVED (inclusive of interest and sums received for seized Boats) from the date when the Crofters Holdings (Scotland) Act, 1886, came into operation, to 31st December, 1906, together with the NUMBER OF LOANS and AMOUNT of INSTALMENTS (inclusive of interest) in ARREAR.

DISTRICTS.	Total No. of Loans carried out.	Amount advanced as Loans to 31st Dec. 1891.*	Monies Recovered.				Arrears, including Interest	
			Instalments, including Interest, received from Borrowers.	Net Sums received for seized or surrendered Boats.	Money received from Insurance Companies for Wrecked Boats.	Total.	No. of Loans.	Amount.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.
Cromarty, .	2	303 10 0	325 10 10	4 3 11	...	329 14 9	1	30 13 10
Helmsdale, .	9	1,519 0 0	1,216 10 6	215 0 11	...	1,431 11 5	9	420 17 1
Lybster, .	8	1,224 0 0	475 14 11	302 2 0	...	777 16 11	4	541 19 2
Wick, . .	71	9,595 1 6	5,399 7 6	2,492 12 1	563 6 1	8,455 5 8	41	2,406 1 7
Orkney, .	6	635 0 0	574 17 7	8 10 0	...	583 7 7	1	127 12 11
Shetland, .	20	1,861 18 0	1,380 12 11	316 5 9	...	1,696 18 8	5	372 2 1
Stornoway, .	101	12,283 11 9	10,495 14 0	1,399 15 4	48 10 8	11,944 0 0	55	2,415 11 10
Barra, . .	20	1,888 6 4	1,376 1 0	272 15 2	...	1,648 16 2	6	436 17 10
Loch Broom,	8	767 9 0	318 18 10	158 4 4	...	477 3 2	7	389 13 6
Fort-William,	1	34 0 0	36 13 5	...	...	36 13 5	...	...
Totals,	†246	30,111 16 7	21,600 1 6	5,169 9 6	611 16 9	‡27,381 7 9	129	§7,141 9 10

* No loans have been made since 1891.

† In four cases of loans the boats mortgaged in security were seized by the Board for non-payment of arrears and sold to other crews, the price being paid partly in cash and partly by fresh mortgage.

‡ Of this sum, £23,707, 12s. 3d. represents principal, and £3,673, 15s. 6d. interest.

§ Of this sum, £6,357, 9s. 9d. represents principal, and £784, 0s. 1d. interest, £6,243, 13s. 8d. of principal having been written off as against the assets of the Local Loans Fund. In the total number of cases of arrears are included those in which boats have been taken possession of and sold, and whose unpaid balances have been written off as above.

APPENDIX K.—No. II.

RETURN OF ARREARS OF LOANS GRANTED IN SECURITY OF BOATS MORTGAGED TO THE FISHERY BOARD, DEEMED TO CONSTITUTE BAD DEBTS, AS AT 31ST DECEMBER, 1906.

Note.—During 1906 no addition was made to the number of cases falling under the above heading, which, at the close of the year, stood at 124. The following are the grand totals under the different headings, viz.:—Amount of loans, £16,117 7s. 9d.; amount repaid by borrowers, £4865 4s. 2d.; amount realised by sales or recovered from Insurance Companies, £5453 17s. 3d.; expenses incurred in prosecutions, seizures, or sales, £456 12s. 8d.; net proceeds of sales, &c., credited to borrowers' accounts, £4997 4s. 7d.; outstanding balances, exclusive of interest, considered irrecoverable, £6254 19s. Of this amount Parliament has, under the Public Works Loans Acts passed from 1892 to 1906, written off £6243 13s. 8d., apportioned among the different crofting fishery districts as follows:—Cromarty, £28 6s. 2d.; Helmsdale, £252 6s. 2d.; Lybster, £309 6s. 4d.; Wick, £2309 17s. 5d.; Orkney, £121 8s. 9d.; Shetland, £328 18s. 11d.; Stornoway, £2176 13s. 5d.; Barra, £403 7s. 7d.; and Loch Broom, £313 8s. 11d.

The above statement does not include interest due or paid.

APPENDIX L.—No. I.

RETURN, by Districts, of COMPLAINTS made to Officers of the FISHERY BOARD, and Investigated and Reported on by them in terms of Section 7 of the Sea Fisheries (Scotland) Amendment Act, 1885, of Injuries done by Beam and Otter Trawl Vessels or other Fishing Boats to the Boats, Nets, Lines, or Gear of Fishermen, in the Year 1906; and showing the Result in each case.

Date of Alleged Offence.	Nature of Complaint.	Locality and Distance from Shore.	Whether Inside or Outside Territorial Waters.	Steps Taken.	Result.
1906.	EYEMOUTH DISTRICT.				
Jan. 25	Damage to lines of boat 'Leader,' B.K. 55, by steam trawler 'Kingfisher,' G.N. 1.	4 miles E. of St. Abbs.	Outside.	Officer investigated case, and assessed damage at 12s.	Complainer accepted 6s. in settlement of claim.
	ABERDEEN DISTRICT.				
June 21	Carrying away 4 cuts of lines, &c., belonging to sail-line boat A. 914, by Dutch drifter S.C.H. 292.	46 miles S.E. ½ S. from Aberdeen.	Do.	In order to present claim for damages outlook was kept for return of the drifter to Lerwick, but she did not re-appear.	Case dropped.
July 19	Trawling through and destroying 8 great lines, &c., belonging to steam liner 'William Olsen,' A. 856, by steam trawler 'Tilia,' G.Y. 1172.	Faroe Bank.	Do.	The claim was presented to the master of the 'Tilia.'	Alleged offence was denied and case was dropped.
	FRASERBURGH DISTRICT.				
Feb. 22	Three great lines hauled and taken away, belonging to s.s. 'Faithlie,' F.R. 985, by s.s. 'Sceptre,' A. 523.	6 miles off Ness Bay, Lewis.	Do.	Officer took complainer's statement, and wrote respondent, whom he found at fault.	Case settled by return of lines.

July 23	Bowsprit of boat 'Rival,' B.F. 1246, broken by boat 'Breadwinner,' B.F. 1732.	16 miles N.E. from Kinnaird Head.	Do.	Officer investigated case and found both parties equally at fault. Damage estimated at £5.	Case settled by each party paying £2 10s. towards repair of damage.
,, 26	Loss of and damage to nets of boat 'Maggie Reid,' F.R. 655, by boat 'Racer,' S.Y. 404.	16 miles off Rattray Bay.	Do.	Officer investigated case, and found complainer was mainly at fault by shooting his nets too close to respondent, who also sustained loss. Damage estimated at £26.	Case dropped.
Aug. 20	Loss of and damage to nets of boat 'Sir William Wallace,' F.R. 194, by boat 'Mary Slessor," B.F. 1803.	6 miles off Cairnbulg.	Do.	Officer investigated case, and found that complainer was mainly at fault by shooting his nets too close to respondent. It appears that in this case six fleets of nets were all more or less fouled, and all sustained damage. Damage estimated at £30.	Case dropped.
	FINDHORN DISTRICT.				
March 6	Four lines of boat 'Marjorie,' I.N.S. 13, damaged by Norwegian steam trawler 'Pinewold,' S.D. 60.	13 miles off Covesea Lighthouse.	Do.	Officer corresponded with Grimsby agent of owners of vessel; damage estimated at £3.	Complainers accepted £2 in settlement of claim.
,, 20	Two lines, one buoy-line, and one buoy of boat 'Children's Friend,' I.N.S. 2448, carried away by Norwegian steam trawler 'Viking,' S.D. 11.	15 miles N. from Covesea Lighthouse.	Do.	Do. do.	Do. do.
, 20	Loss of five great lines of s.s. 'Coryphonea,' I.N.S. 558, caused by steam trawler 'Princess Victoria,' S.N. 351.	From 15 to 20 miles S.S.W. of Fair Isle.	Do.	Officer corresponded with owners of vessel; damage estimated at £8.	Complainers accepted £4 in settlement of claim.

APPENDIX L.—No. 1.—*continued.*

Date of Alleged Offence.	Nature of Complaint.	Locality and Distance from Shore.	Whether Inside or Outside Territorial Waters.	Steps taken.	Result.
1906.	WICK DISTRICT.				
Jan. 19	Damage to nets of boat 'Curlew,' B.F. 1239, by Norwegian trawler 'Apollo,' S.D. 7.	5 miles off Wick.	Outside.	Officer investigated case, and assessed damage at £3.	Case allowed to drop.
March 4	Damage to lines of boat 'Alexandra,' W.K. 499, by Norwegian trawler 'Kimberley,' S.D. 22.	Do.	Do.	Officer investigated case, and assessed damage at £7.	Do. do.
	SHETLAND.				
June 8	Damage to boat 'Candace,' L.K. 554, through collision with boat 'Jessie M. Bruce,' B.F. 1053.	North Channel of Lerwick harbour.	Inside.	Officer investigated case, and assessed damage at £5.	Respondent offered £2 10s., which complainer accepted in full.
,, 18	Damage to mizzen-mast of Swedish fishing ketch 'Odin' through collision with boat 'Spider,' B.F. 317.	Baltasound Harbour.	Do.	Officer investigated case, and assessed damage at £7.	Respondent paid damage as assessed.
July 10	Damage to nets of boat 'Guide Me,' K.Y. 301, by steam drifter 'General White,' L.T. 151.	42 miles S.E. by S. from Bressay.	Outside.	Officer investigated case, found respondent at fault, and assessed damage at £2 10s.	Do. do.

Aug. 20	Damage to nets of steam drifter 'Eagle.' L.T. 975, by crew of steam drifter 'Ella,' W.K. 709.	40 miles S.E. by E. ½ E. from Baltasound.	Do.	Officer investigated case, and found that both boats' nets had been unavoidably damaged through stress of weather.	Case dropped.
Sept. 28	Damage to anchor rope of 'Craigenroan,' W.K. 67, by trawler 'Bracondale,' A. 631.	Inside Lerwick Harbour.	Inside.	Officer communicated with defender, who admitted liability; damage assessed at 15s.	Respondent paid damage as assessed.
	STORNOWAY DISTRICT.				
Jan. 17	Damage to nets of steam drifter 'Johanna Petrie,' P.D. 406, by boat 'Magnificent,' S.Y. 350.	1 mile from Tiumpan Head.	Do.	Officer investigated case, and assessed damage at £2.	Case allowed to drop.
,, 18	Damage to nets of boat 'Director,' S.Y. 475, by steam drifter 'Golden Hope,' B.F. 1340.	2 miles from Tolsta Head.	Do.	Officer investigated case, and assessed damage at £7.	Respondent denied liability. Case was handed to a local solicitor.
,, 26	Damage to nets of steam drifter 'Emily Reiach,' P.D. 496, by steam drifter 'Flora,' W.K. 719.	1 mile from Cellar Head.	Do.	Officer investigated case, but could obtain no evidence of the 'Flora' having done the damage.	Case dropped.
	BARRA.				
May 7	Damage to five herring nets belonging to boat 'Royal Tar,' C.Y. 343, by boat 'Mystical Rose,' C.Y. 352.	¾ mile east of Muldonach Island, Barra.	Do.	Officer interviewed both crews, examined damage, and found complainer's evidence insufficient to implicate respondent.	Case dropped.

APPENDIX L.—No. I.—*continued.*

Date of Alleged Offence.	Nature of Complaint.	Locality and Distance from Shore.	Whether Inside or Outside Territorial Waters.	Steps Taken.	Result.
May 16	Damage to stem of boat 'King Edward,' I.N.S. 479, and small boat thereof crushed, by boat 'Olive,' B.F. 816.	Castlebay Loch, close to west shore.	Inside.	Officer interviewed both crews, found respondent liable, and assessed damage at £10.	Respondent denied liability. Case not settled at close of year.
,, 19	Damage to rudder of boat 'Annie Gordon,' I.N.S. 308, by boat 'Taylors,' F.R. 656.	Castlebay Loch, 500 yards from west shore.	Do.	Officer interviewed both crews, found respondent liable, and assessed damage at £5.	Case settled by complainer accepting £4 10s. in full of claim.
,, 31	Damage to jigger boom of boat 'Trois Freres,' F.R. 850, by s.s. 'Volana,' of Sunderland.	¼ mile east of Muldonach Island, Barra.	Do.	Communicated with owner of 'Volana,' found respondent liable, and assessed damage at £3.	Amount, as assessed, paid through officer.
	F.C. 'VIGILANT.'				
Feb. 15 and Mar. 6	Loss of fishing lines by the boats 423 C.N., 417 C.N., and 415 C.N.	Not definitely ascertained, but believed to be within 3-mile limit.	Do.	Commander investigated complaints.	Informed afterwards that part of lost lines were recovered by being fouled with other lines which were shot in same locality.
Sept. 7	Loss of buoys and buoy strings of fishing boat 202 A.G. through steamer 'Asia.'	About 3 miles off Holy Island, Firth of Clyde.	Do.	Do. do.	Captain of steamer 'Asia' promised to see skipper of fishing boat *re* loss sustained.

APPENDIX L.—No. II.

RETURN for 1906 of **PROSECUTIONS undertaken** in the Sheriff Courts of Scotland, under the **Summary** Jurisdiction (Scotland) Acts, of (1) the **Masters** of British Beam and Otter Trawl Vessels, and (2) the Masters of Foreign Beam or Otter Trawl Vessels, for Alleged Infringement of the Bye-laws of the Fishery Board for Scotland (including Bye-laws No. 17 and 20) or the Provisions of the **Acts prohibiting Beam** or **Otter Trawling** in certain **Waters** round the Coasts of Scotland, **showing the Result in each Case.**

Date of Alleged Offence.	Name, &c., of Person charged.	Name, Letters, and Number of Vessel.	Where Alleged Offence Committed.	Statute or Bye-law Contravened.	Place and Date of Trial.	Result of Trial.	By whom Detected.
		PROSECUTION	*OF MASTERS*	*OF BRITISH TR*	*AWLERS.*		
1905. Oct. 8	Ernest Sandberg.	'Edward Robson,' H. 73.	Near Rhuevinchuile Point, Sutherlandshire, in territorial waters.	Herring Fishery (Scotland) Act, 1889.	Dornoch, January 9.	Found guilty, and fined £100 or 60 days' imprisonment. Accused went to prison. Gear seized.	Commander of Fishery Cruiser 'Minna.'
Dec. 13	Benjamin Clark.	'North Pole,' A. 381.	Stonehaven Bay, in territorial waters.	Do.	Aberdeen, January 12.	Found guilty, and fined £50 or 30 days' imprisonment. Fine paid. Gear seized.	Do.
1906. Jan. 21	Frederick Wallaston	'Minerva,' H. 520.	Near Tiumpan Head, Lewis, in territorial waters.	Do.	Stornoway, February 27.	Not proven.	Lighthouse keeper and coastguardsman, Tiumpan Head.
Feb. 26	John Robb.	'Cruiser,' G.N. 54.	Near May Island, in territorial waters.	Do.	Cupar, March 27.	Do.	Commander of Fishery Cruiser 'Brenda.'

APPENDIX L.—No. II.—*continued.*

Date of Alleged Offence.	Name, &c., of Person charged.	Name, Letters, and Number of Vessel.	Where Alleged Offence Committed.	Statute or Bye-law Contravened.	Place and Date of Trial.	Result of Trial.	By whom Detected.
1906. Feb. 26	James Ramsay.	'May Queen,' L.H. 356.	Near May Island, in territorial waters.	Herring Fishery (Scotland) Act 1889.	Cupar, March 27.	Found guilty, and fined £20 or 21 days' imprisonment. Fine paid.	Commander of Fishery Cruiser 'Brenda.'
Mar. 2	Charles Angus.	'Aries,' G.N. 62.	Do.	Do.	Do., March 30.	Found guilty, and fined £40 or 21 days' imprisonment. Fine paid. Gear seized.	Commander of Fishery Cruiser 'Freya.'
Jan. 13	Amos Summers.	'Stoic,' G.Y. 13.	Off Sandray Island, Barra, in territorial waters.	Do.	Lochmaddy, April 5.	Found guilty, and fined £90 or 60 days' imprisonment. Fine paid. Gear seized.	Commander of Fishery Cruiser 'Brenda.'
Mar. 27	Richard Bettes.	'Wyre,' F.D. 196.	Near Island of Cara, in territorial waters.	Do.	Campbeltown, April 24.	Found guilty, and fined £50 or 30 days' imprisonment. Fine paid.	Commander of Fishery Cruiser 'Vigilant.'
June 9	John Netherton.	'Jacinth,' H. 340.	Off Buaile Point, Ness, Barvas, in territorial waters.	Do.	Stornoway, June 11.	Found guilty, and fined £75 or 60 days' imprisonment. Fine paid. Gear seized.	Commander of fishery Cruiser 'Freya.'
Aug. 16	Richard Sedgwick.	'Chinkiang,' A. 798.	In North Minch, off Clomare Head.	Do.	Do. August 17.	Not proven.	Do.

May 26, 27, 28, and June 1	Adam Sutherland.	'Scottish Belle,' A. 512.	Near Foula Island, in territorial waters.	Do.	Lerwick, August 24.	Found guilty, and fined £50 or 30 days' imprisonment. Fine paid.	Foula fishermen.
July 11	Walter Lyle.	'Bendigo,' G.N. 2.	St. Andrews Bay, in territorial waters.	Do.	Cupar, September 7.	Found guilty, and fined £50 or one month's imprisonment. Fine paid. Gear seized.	Commander of Fishery Cruiser 'Brenda.'
,, 11	John Lyon.	'Annie Walker,' D.E. 5.	Do.	Do	Do.	Pled guilty, and fined £50 or one month's imprisonment. Gear seized. Accused went to prison.	Do.
Aug. 13	Walter Hall.	'St. Gothard,' G.N. 46.	Near May Island, in territorial waters.	Do.	Do.	Do.	Do.
Sept. 18	Patrick Fitzpatrick.	'Lochnaver,' A. 45.	Near Sandness, Shetland, in territorial waters.	Do.	Lerwick, September 19.	Pled guilty, and fined £50 or 30 days' imprisonment. £46 13s. 4d. of fine paid. Gear seized.	Do.
,, 22	Edward Stewart.	'Bracondale,' A. 63.	Do.	Do.	Do. September 24.	Do. Accused went to prison. Gear seized.	Do.
,, 22	Thos. Coupland.	'Chancellor,' S.N. 279.	Near Walls, Shetland, in territorial waters.	Do.	Do.	Do. Fine paid. Gear seized.	Do.

APPENDIX L.—No. II.—*continued.*

Date of Alleged Offence.	Name, &c., of Person charged.	Name, Letters, and Number of Vessel.	Where Alleged Offence Committed.	Statute or Bye-law Contravened.	Place and Date of Trial.	Result of Trial.	By whom Detected.
1906. June 16	Thos. Stafford.	'Courtland,' G.Y. 35.	Moonen Bay, Isle of Skye, in territorial waters.	Herring Fishery (Scotland) Act, 1889.	Portree, October 4.	Found guilty, and fined £100 or 60 days' imprisonment. Fine paid. Gear seized.	Commander of Fishery Cruiser 'Vigilant.'
Nov. 7	George Warman.	'Glenogil,' G.W. 8.	Near Sandness, Shetland, in territorial waters.	Do.	Lerwick, November 8.	Pled guilty, and fined £50 or 30 days' imprisonment. Fine paid. Gear seized.	Commander of Fishery Cruiser 'Brenda.'
Sept. 11	Jas. A. Mewse.	'St. Machar.' A. 506.	Near Balta Island, Shetland, in territorial waters.	Do.	Do. November 27.	Found guilty, and fined £75 or 40 days' imprisonment. Fine paid.	Unst fishermen.
Nov. 27	F. W. Wallaston.	'Minerva,' H. 520.	Off Bayble Head, Lewis, in territorial waters.	Do.	Stornoway, November 28	Found guilty, and fined £80 or 60 days' imprisonment. Fine paid. Gear seized.	Commander of Fishery Cruiser 'Minna.'
Sept. 28	Frederick Powderall.	'Nightingale,' A. 20.	Norwick Bay, Shetland, in territorial waters.	Do.	Lerwick, November 28.	Pled guilty, and fined £100 or 60 days' imprisonment. Accused went to prison. Gear seized.	Commander of fishery Cruiser 'Brenda.'
,, 22	Henrick Kliever	'St. Nicholas,' A. 489.	Off Ronasvoe, Shetland, in territorial waters.	Do.	Do.	Found guilty, and fined £100 or 60 days' imprisonment. Accused went to prison. Gear seized.	Do.

,, 22	Peter Petersen.	'Laureate,' S.N. 257.	Off Walls, Shetland, in territorial waters.	Do.	Do. November 29.	Found guilty, and fined £75 or 40 days' imprisonment. Fine paid. Gear seized.	Do.
,, 22	Robt. Brown.	'Sunray,' A. 669.	Do.	Do.	Do.	Pled guilty, and fined £50 or 30 days' imprisonment. Fine paid. Gear seized.	Do.
,, 7, 14, and 16	Henrick Kliever.	'St. Nicholas,' A. 489.	Near Foula Island, in territorial waters.	Do.	Do. November 30.	Found guilty, and fined £100 or 60 days' imprisonment. Accused went to prison.	Foula fishermen.
,, 22	Joseph Rasmussen.	'Ocean King,' A. 174.	Off Walls, Shetland, in territorial waters.	Do.	Do. December 1.	Pled guilty, and fined £50 or 30 days' imprisonment. Accused went to prison. Gear seized.	Commander of Fishery Cruiser 'Brenda.'
,, 22	Harry Spence.	'Harry Ross,' A. 453.	Do.	Do.	Do.	Pled guilty, and fined £75 or 40 days' imprisonment. Fine paid. Gear seized.	Do.
Dec. 22	Christian Pedersen.	Bedouin,' A. 610.	Near Fair Island, in territorial waters.	Do.	Do. December 22.	Do.	Commander of Fishery Cruiser 'Minna.'

APPENDIX L.—No. II.—*continued.*

Date of Alleged Offence.	Name, &c., of Person charged.	Name, Letters, and Number of Vessel.	Where Alleged Offence Committed.	Statute or Bye-law Contravened.	Place and Date of Trial.	Result of Trial.	By whom Detected.
		PROSECUTIONS OF MASTERS OF FOREIGN TRAWLERS.					
1906. Jan. 3	Louis Hansen.	'Taurus,' B.K. 7.	Off Burghead, in territorial waters.	Herring Fishery (Scotland) Act, 1889.	Elgin, February 1.	Pled guilty, and fined £100 or 60 days' imprisonment. Fine paid. Gear seized.	Commander of Fishery Cruiser 'Minna.'
1905. Nov. 30	Emmanuel Mortensen.	'Niobe,' S.D. 5.	5 miles E. by N. from Lossiemouth, outside territorial waters.	Contravention of Board's Bye-law No. 10.	Dornoch, February 13.	Found guilty, and fined £50 or 15 days' imprisonment. Fine paid. Appeal notified.	Do.
Dec. 6	Thomas Robinson.	'Verbena,' S.R. 10,	5 miles S.S.E. from Garty Point, Sutherlandshire.	Do.	Do. March 6.	Do. Accused went to prison.	Do.
,, 15	Arthur Lambert.	'Pinewold,' S.D. 60.	7 miles E. by N. ¾ N. from Tarbetness, outside territorial waters.	Do.	Do.	Do. Fine paid.	Do.
Mar. 20	Mathias Andreason.	'Waago,' S.D. 9.	Off Dunbeath, Moray Firth, in territorial waters.	Herring Fishery (Scotland) Act, 1889.	Wick, April 4.	Found guilty, and fined £25 or 20 days' imprisonment. Accused went to prison. Gear seized.	Do.

May 29	Neils S. Andersen.	'Alpha,' S.D. 10.	Off Lybster, Moray Firth, in territorial waters.	Do	Do. July 6.	Found guilty, and fined £75 or 40 days' imprisonment. Fine paid. Gear seized.	Commander of Fishery Cruiser 'Brenda.'
,, 29	Ammund Olsen.	'Croton,' S.D. 6.	Do.	Do.	Do.	Do. Accused went to prison. Gear seized.	Do.
,, 29	Christian Kromke.	'Kimberley,' S.D.	Do.	Do.	Do.	Do.	Do.
Mar. 18	Ole Gueruis Olsen.	'Northwold,' S.D. 25.	Moray Firth, 2½ miles off Covesea Light.	Do.	Elgin, July 19.	Do.	Crew of Banff fishing boat.

APPENDIX L.—No. III.

RETURN for 1906 of PROSECUTIONS undertaken in the Sheriff Courts of Scotland, under the Summary Jurisdiction (Scotland) Acts, of (1) the Masters of British Beam or Otter Trawlers or other Fishing Vessels, and (2) Foreign Beam or Otter Trawlers, for alleged Infringement of (*a*) the Regulations for the Registering, Lettering, and Numbering of Sea Fishing Boats; (*b*) the Regulations for the Prevention of Collisions at Sea; (*c*) the Herring Fishery (Scotland) Act, 1889, Sec. 5, fixing a weekly close time for Herring Fishing on the West Coast of Scotland; and (*d*) any other offence (other than illegal trawling).

Date of Alleged Offence.	Name, and Designation of Party Charged.	Name, Letters, and Number of Vessel, distinguishing between Trawlers and Fishing Vessels.	Where Alleged Offence Committed.	Nature of Offence.	Place and Date of Trial.	Result of Trial.	By whom Detected.
1905. Oct. 8	Ernest Sandberg.	Trawler 'Edward Robson,' H. 73.	Off Rhuevinchuile Point, Farr, Sutherlandshire.	Failure to exhibit Regulation Lights.	Dornoch, 9th Jan. 1906.	Pled guilty and fined £5 or 30 days' imprisonment. Accused went to prison.	Commander of fishery cruiser 'Minna.'
1906. Sept. 14 & 16	Heinrich Kliever.	'St. Nicholas,' A. 489.	Near Foula Island, Shetland, in territorial waters.	Contravention of Regulations for Registration, &c., of British Sea Fishing Boats.	Lerwick, 30th Nov. 1906.	Pled guilty and fined £20. Fine not paid.	Foula fishermen.
,, 28	Frederick Powderall.	'Nightingale,' A. 20.	Norwick Bay, Shetland, in territorial waters.	Do.	Lerwick, 29th Nov. 1906.	Do.	Unst fishermen and commander of fishery cruiser 'Brenda.'

APPENDIX L.—No. IV.

RETURN, for the years from 1886 to 1906 inclusive, of PROSECUTIONS undertaken in the Sheriff Courts of Scotland, under the Summary Jurisdiction (Scotland) Acts, of the Masters of Beam or Otter Trawl Vessels for alleged infringements of the Byelaws of the Fishery Board, or the Provisions of the Acts prohibiting Beam or Otter Trawling in certain waters round the Coasts of Scotland, showing for each of the twenty-one years the number of such PROSECUTIONS, the number of CONVICTIONS obtained, the number of VERDICTS of "NOT GUILTY" or "NOT PROVEN," the AMOUNT of FINES IMPOSED, the AMOUNT PAID, the NUMBER of MASTERS who chose the alternative of imprisonment; and, for the years from 1896 to 1906 inclusive, the number of DETECTIONS made (1) by MEANS of (*a*) the BOARD'S CRUISERS, (*b*) ADMIRALTY VESSELS, and (2) by FISHERMEN or OTHER PERSONS.

Years.	Number of Prosecutions undertaken.	Number of Convictions obtained.	Number of Verdicts of "Not Guilty."	Number of Verdicts of "Not Proven."	Amount of Fines imposed.			Amount of Fines paid.			Number of Masters who chose the alternative of imprisonment.	Number of Detections made by means of Board's cruisers.	Number of Detections made by means of Admiralty vessels.	Number of Detections made by Fishermen or other persons.
					£	s.	d.	£	s.	d.				
1886.	7	6	1	...	26	0	0	26	0	0	...	...	...	...
1887.	11	10	1	...	26	5	0	26	5	0	...	...	...	...
1888.	3	3	...	...	35	0	0	25	0	0	1	...	...	...
*1889.	20	16	...	4	117	0	0	107	0	0	1	...	...	...
1890.	36	32	1	3	254	0	0	239	0	0	1	...	...	...
1891.	23	18	3	2	490	0	0	410	0	0	2	...	...	...
1892.	12	9	...	3	215	0	0	210	0	0	1	...	...	...
1893.	11	11	...	...	370	0	0	270	0	0	1	...	...	...
1894.	7	5	...	2	250	0	0	5	0	0	4	...	...	...
1895.	30	24	4	2	467	0	0	410	0	0	2	...	...	...
†1896.	23	20	...	3	950	0	0	445	0	0	7	3	8	12
1897.	20	15	...	5	737	0	0	417	0	0	5	...	11	9
‡1898.	5	4	...	1	102	0	0	17	0	0	2	...	2	3
1899.	17	17	...	...	665	0	0	555	0	0	3	8	1	8
1900.	31	30	...	1	1,705	0	0	1,167	0	0	10	22	2	7
§1901.	26	24	...	2	1,045	0	0	550	0	0	10	17	3	6
1902.	21	18	...	3	927	0	0	502	0	0	7	9	2	10
1903.	27	25	2	...	1,355	0	0	1,011	0	0	6	16	3	8
1904.	33	30	1	2	1,960	0	0	548	15	0	21	23	...	10
1905.	38	34	2	2	2,645	0	0	1,475	13	4	13	27	3	8
1906.	38	35	...	3	2,280	0	0	1,376	13	4	13	33	...	5
	438	386	15	38	16,621	5	0	9,793	6	8	110	158	35	86

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* In 1889 an Act was passed making trawling illegal in territorial waters around the coast of Scotland, excepting in certain areas; previous to that year, prosecutions for trawling could only be undertaken for contraventions of the Board's Byelaws.

† Previous to 1896 no record was kept of "Means of Detection." ‡ In summer of 1898 the Board acquired two new cruisers; previous to that they only possessed one.

§ The Board acquired a third new cruiser in December 1900, and a fourth in September 1904, but in October 1904 they disposed of one of the cruisers built in 1898 as being too small to be practically useful.

APPENDIX M.

REPORTS BY THE INSPECTORS OF SEA FISHERIES AND DISTRICT FISHERY OFFICERS.

I.—Inspectors of Sea Fisheries.

General Inspector of Sea Fisheries.

General Remarks.

The marvellous progress and prosperity which have attended the Scottish fisheries during the past few years have not only been maintained, but considerably increased, during the year 1906. The results of the year under review, when compared with those of the preceding year, show a small falling off in the quantity of fish landed, but a very substantial increase in the sum paid to fishermen, which probably is the best proof of increased prosperity.

When comparing the quantity and value of fish landed in 1906 with the average quantity and value for the preceding five years, it is found that the former exceed the latter by no less than half a million cwts., and considerably more than half a million pounds.

A closer examination of the statistics shows that this remarkable prosperity is attributable chiefly to the herring fishing. The herring fishing of 1905, though somewhat less productive than in some former years, exceeded in value the previous best on record by fully one hundred thousand pounds. The season of 1906 has produced a still higher record, and that with a reduced catch, the increase in value being fully three hundred thousand pounds, while the decrease in quantity amounts to over one hundred thousand crans compared with the preceding year.

The other (trawl and line) fishings, though not showing such a remarkable development, still continue to make steady progress both in quantity and value. During 1906 the quantity of all kinds of fish landed other than herrings shows an increase of one hundred and thirty thousand cwts. over the year 1905, and an increase of three hundred and sixty thousand cwts. upon the average landings of the previous five years. There has not, however, been a corresponding increase in value. The value of fish landed during 1906 shows an increase of only a little over twenty thousand pounds. About the same proportion applies to the increase in value over the average value of the preceding five years. The average price for trawl and line-caught fish shows very little variation in any of the years from 1900 onwards, the price per cwt. keeping steadily at about ten shillings or thereabouts. In no year does the average price per cwt. drop below ten shillings, but in one or two of these years the price reaches a few pence over that sum. In few industries does the value of goods vary so much in the course of a single year as do the prices of the fish landed from the trawl and line fishings. One week fish may be at famine prices, and next week the fish so plentiful that they are sometimes unsaleable except as manure. However that may be, the average annual price per cwt. remains about the same year after year.

There is perhaps no better evidence of the prosperity of the Scottish fisheries than is to be found in the amount of capital invested in boats and fishing gear. Compared with the capital invested in 1896 in sailing boats alone, there is an increase in 1906 of no less than a quarter of a million pounds, although sailing boats have for the last three years been decreasing in number and value annually.

With regard to steam drifters and liners, the capital invested in them has increased during the same period from £120,756 to £704,648. Owing to the rapid increase which is taking place in the number of these vessels there is every likelihood that during the coming season their total value will be at least one million pounds. A very noteworthy feature of these two classes of fishing boats is that they are owned almost entirely by the fishermen themselves—in the case of the sailing boats almost without exception, and in the case of the steam vessels to the extent of about 75 per cent., the remaining 25 per cent. belonging to limited companies. In the present prosperous condition of the industry the fishermen are likely to increase their proportion of the ownership of the vessels. Fishermen on the East Coast have always been owners of their own boats. Those of them who have been masters of steam vessels owned by companies have felt themselves rather restricted, and at the first opportunity have resumed their freedom of action by getting a steam vessel for themselves, or by going back to a sailing boat. In addition to this large capital invested in boats and fishing gear, a very large proportion of East Coast fishermen are the owners of their dwelling-houses, which represent a very large capital, all of which has been acquired by their own industry, or, in other words, has been taken out of the sea. The life of a fisherman is, no doubt, a pretty hard one, but the conditions under which his work is carried on now, compared with those obtaining a generation ago, show a vast improvement in the safety and comfort of the men. The boats are all fitted with sleeping berths and modern cooking utensils, whereas in the older days there was nothing but the hard boards to lie on, and the only cooking utensil was a kettle. Many men are still alive who began their fishing life in open boats not half the size of the boats in use to-day. In the winter season they would sometimes spend a week at sea in these boats working long-lines. If there is a great advance in boats, &c., there is no less improvement in the houses of the men. This in a great measure is due to the spirit of emulation existing among fishing communities. Each man tries to excel his neighbour to some extent, and none of them likes to be behind his neighbour if he can help it. In short, I think the East Coast fishermen of Scotland will, in material prosperity and comfort, compare very favourably with any class of workmen in the country.

The methods of fishing pursued and the kinds of fish caught were the same as in former years. The herring fishing continued to be the most important branch of the industry, and the branch from which the large majority of the fishermen derived their prosperity. Many of them have abandoned line fishing altogether, and devote their whole time to the pursuit of the herring fishing, which necessitates their being from home a considerable portion of the year. In the early summer they are found on the West Coast of Ireland or the West Coast of Scotland, all along the Western Islands from Barra Head to the Butt of Lewis. In midsummer they are found all around the Shetland Isles. In the early autumn they are found all along the East Coast of Scotland, and later in the season they conclude their year's work on the coast of Norfolk. Enterprise in the industry is by no means confined to the fishermen. Fishcurers and workers move along the same routes, thereby making it possible for the fishermen to get a market for what fish they may land.

No matter where the fishermen find the fish they are always met by a curer ready to purchase, cure, and prepare them for market.

It is not only the fishermen who have benefited by the success of the herring fishing, but the workers on shore also, especially the gutters and packers, many of whom belong to the Western Isles, and in the course of a successful season make very good earnings. Probably no district of Scotland benefits so much from the East Coast herring fishing as does the Island of Lewis, and with so little outlay on the part of the inhabitants, as a very large proportion of the hired fishermen and shore-workers come from that district. Success has certainly attended the herring fishery on the East Coast of Scotland and Shetland during the past few years, but no one can say that it has come to the fishermen while they have stood with folded arms.

There was during the year a still further decrease in the number of sailing boats, and also in the quantity and value of their fishing gear. This decrease in sailing boats began in the year 1899, and has gone on to a greater or less extent annually ever since. The decrease in that period amounts to about 1800 boats, and consists mostly of small and worn-out craft, which were of little value. While the number has decreased to such an extent, the sailers now in use, together with their fishing gear, have increased in value by a sum of £230,000 when compared with 1898.

Means of Capture.

In steam drifters there was an increase of 65 on the number of vessels at work in 1905, making the total number belonging to Scotland 274, valued at over £700,000. There is every indication that this number will during the coming year be increased by fully 100 new vessels at a cost of not less than a quarter of a million pounds. In addition to these there were 271 steam vessels belonging to ports on the East Coast of England employed during the herring fishing season chiefly in Shetland waters, and which are now included for the first time in the means of capture returns (App. A 1).

Steam Trawlers.

The trawling branch of the industry is also making progress, though not with such rapid strides as was the case a few years ago. There has been an increase of ten in the number of vessels as compared with the figures for 1905, but that by no means represents the actual number of new vessels added to the fleet, as several small vessels have been sold, and a few wrecked, all of which have been replaced by new vessels. The trawling industry shows every sign of being in a fairly prosperous condition.

In the total value of boats and fishing gear comprising the means of capture of the Scottish fisheries there is an increase of over £80,000 compared with the figures for the preceding year. The total estimated value for 1906 is no less than £4,111,496, while there is every likelihood that this immense sum will be increased by almost half a million pounds during the coming year, owing to the number of steam vessels both for trawl and drift net fishing which are in course of construction all over the East Coast. The orders have been so numerous that often there has been difficulty in getting them placed, the chief trouble being in getting the engines manufactured. When the steam vessels were first introduced they were built of wood, then for two or three years steel was preferred, and now wood is again being reverted to, a large majority of the vessels now in course of construction being of that material. The fishermen think the wood-built vessels are more buoyant, and no doubt they are from £500 to £700 cheaper than the steel vessels.

Fish Landed.

The total quantity of fish landed during the year was rather less than in 1905, but was considerably over the average of the five preceding years, while the value of all kinds of fish, exclusive of shellfish, showed an increase of about £330,000 over the record value of 1905, and of no less than £570,000 over the average value of the five preceding years. As in former years, herrings accounted for about two-thirds of the total quantity of fish landed and considerably more than half the value. The increased value referred to was almost entirely due to the increased value of herrings, which reached the average price of 23s. 1d. per cran, against 17s. 7d. per cran in the previous year. The average price of all other kinds of fish was about the same as in the last few years.

Curing or preparing the Fish for Market.

In neither herrings nor white fish was there any new departure in the methods of preparing the fish for either home or foreign markets. A large proportion of the cod, ling, haddocks, &c., landed by trawlers at Aberdeen and Granton are despatched to market in a fresh state; a considerable quantity of haddocks is also smoked, whilst cod and ling are cured dried or filleted, this latter method making fair progress. This part of the industry gives employment to a very large number of people on shore all the year round.

The herring fishery as a source of employment, of course, overshadows all other branches of the industry while it lasts, but it seldom lasts in any one district much longer than from two to three months, the workers consequently moving along with it to other districts. The gutters and packers alone in a season such as either of the past two would receive as wages and arles nothing less than from £90,000 to £100,000. In addition to the women there is a large number of men employed as coopers, carters, and labourers, who, during the season, earn very good wages. There is no branch of the fishing industry that circulates so much money in the payment of labour as that of the herring fishing.

It may be of some interest to enter a little more into detail regarding the herring fishing at the East Coast and Orkney and Shetland districts.

The fishing was begun in Shetland as early as April, but with very poor results. This early commencement did not meet the wishes of the local fishermen, who attempted to enforce a close time by preventing the stranger fishermen from landing their fish. The forces of law and order were too strong for them, however, and some of them were brought before the Sheriff, with the result that such an attempt is not likely to be made again. About the beginning of June a large fleet of boats had assembled at the west and north stations, and the usual preparations were made to deal with a successful fishing. During that month very poor success was met with, more especially at the west-side stations, where the worst season on record was experienced. The result was that these stations were closed, the fishermen going elsewhere, most of them to the East Coast districts. The Baltasound fleet also met with very poor success during the month of June compared with what was met with in former years, while at Lerwick and the south stations a successful fishing was being made.

As illustrating the erratic movements of the herrings, it may be stated that during the time when there was a failure of the fishing at the north and west stations of Shetland (where in former years great success was the rule), there was a very successful fishing going on all along the East Coast from Berwick to Wick, with the result that the unprecedented quantity of 160,000 crans were landed in the East Coast districts during the month of June. In no former season had such a quantity been landed at so early a period of the season. The season's catch in Shetland, though a very large one, fell much short of expectations and of preparation. The season ended with a decrease of 187,000 crans compared with the former year's catch, while there was an increase in the amount paid to fishermen of over £24,000. It is in the district of Shetland that the steam drifters find the best outlet for their energies. They can come and go to sea when it suits them, as the harbours they fish from are all natural ones. In the East Coast harbours it often happens that, however willing, they are unable to get to sea owing to the congestion. If they owe something to Shetland in this respect the district owes a good deal to them for the extraordinary development of the industry in recent years. During the season very large earnings were made by the steam vessels, a considerable number having over £2000. The sailing boats, both local and strangers, also had a very successful season, the highest earnings among the local crews amounting to £1290, while many of them reached from six to eight hundred pounds. While there was such a decrease in Shetland there was a very successful fishing being landed in the Aberdeenshire and Eyemouth districts, where the catch amounted to over 100,000 crans more than in the preceding year, with an increase in value of almost £250,000. A little further north of Aberdeenshire, or just across the Moray Firth, at Wick, the fishing was, during the latter part of the season, in the month of August, little less than a failure. Such a poor return for that month has rarely, if ever, occurred in the history of the industry at Wick. The boats fishing from Orkney met with fair success, as they fished chiefly near the prolific Fair Isle fishing grounds. As in other districts, high prices were prevalent, the engagement system having ceased there as well as elsewhere.

In the Firth of Clyde the fishing, though a great improvement on that of the previous year both in quantity and value, was still considered a poor one, even though the fishermen received over £21,000 more than in 1905. Most of the fish were caught on the coasts of Ayr and Wigtownshire, and comparatively few in Kilbrannan Sound or Loch Fyne—more evidence of the erratic movements of the herrings.

Herring Curing.

Curing went on on much the same lines as in former years. The great bulk of the fish was, of course, cured for export to the Continental markets, the quantity consumed in this country constituting a very small percentage of the whole. As a large proportion of the catch was obtained in the earlier part of the season, curing in such a manner as to please the consumer, and yet preserve the fish in good condition for some time, was rendered a somewhat difficult matter, more especially as the weather was very warm. Light salting was accountable for a few parcels going wrong, but on the whole there were not many barrels found spoiled from this cause, curers being quite alive to the necessity of using sufficient salt in the curing process.

Branding of Herrings.

There has been a very considerable falling off in the quantity presented for the official brand. There is no diminution in the demand for, and the usefulness of, the Board's brand, but the season under review has been exceptional in several ways. In the first place, a large proportion of the catch on the East Coast was got in the month of June (160,000 crans), thus being unsuitable for the brand, while during the month of August, which is the month when herrings are most suitable for curing for the brand, the fishing proved to be rather slack. This was specially the case in both Shetland and Wick, compared with former years. The earlier-caught herrings are shipped off for immediate consumption, while branded herrings are expected to keep, and do keep, in sound condition for from eight to twelve months.

The herrings entitled to the brand have always commanded the highest price in the markets, as, with very few exceptions, they have always turned out what they are represented to be.

Exportation of Herrings.

During the season there were some slight changes in the places to which herrings were exported. During the two previous years considerable quantities of herrings were exported to Archangel, because they were admitted free of duty provided they were carried in Russian ships. This concession was taken advantage of by importers, who afterwards brought the herrings into the interior of Russia in competition with the herrings imported by way of the Baltic ports, on which 13s. per barrel of duty had to be paid. Representations were made to the Government, with the result that the duty is now imposed at Archangel, and not a single barrel was shipped that way during 1906. A new departure was made in another direction, a cargo of herrings having been sent from Peterhead to Odessa in the Black Sea, the first for many years. Otherwise the exportation has been to the usual ports in Germany and Russia, the latter taking an increasing quantity year after year. The greater share of the trade in Russia is in the hands of Jewish firms, who have within the last few years developed the trade immensely, pushing it all over the Empire.

Fish other than herrings, or trawl and line-caught Fish.

The other branches of the industry are of only slightly less importance than the herring fishery with regard to value, but of much greater importance in respect of providing a food supply for the home markets. Almost the whole produce of this branch of the fishery is consumed at home, while practically the entire catch of herrings is sent abroad. There is a considerable increase in the quantity of white fish landed when compared with the preceding year, and also an increase in value. This is due in some measure to the improvement in the small-line fishing which set in towards the close of the year, particularly on the north-east coast. Of the fish landed, haddocks and cod amounted to about two-thirds of the whole. In connection with trawling attention may be directed to the large quantity of catfish, monks, and hake landed by trawlers during the last few years. During 1906 no less than 61,000 cwts. of these fish were landed, almost entirely by trawlers. Having in view the facts that these fish were very rarely caught by lines, and their destructive powers amongst other fish, such as herrings and haddocks, it can be seen what an immense benefit it is to the general prosperity of the fisheries to have such large quantities of these destructive fish captured annually which were formerly allowed to roam the sea until they died of old age.

Shell Fisheries.

The value of shell-fish amounted to £72,000 for the year, or just about the average of the past few years. There is no change in the kinds of shell-fish or in the localities from which they are taken. Together the value of all kinds of fish landed during the past year amounts, for the first time in the history of the Scottish fisheries, to over three million pounds, unmistakeable proof of the progress and prosperity of the industry.

Alex. Millikin.

Assistant Inspector of Sea Fisheries.

General Remarks.

The general results of the various fisheries for the year 1906 in the groups of districts which extend from Buckie to Shetland on the North-east Coast, and from Stornoway to Fort-William on the West Coast, were fairly satisfactory. In the means of capture the chief feature of the industry was the steady development of the steam drifter. In two of the districts (Buckie and Findhorn) 29 vessels were built at a cost of about £75,000. Taking into account those in course of construction and those for which orders have been placed, the total for the coming year will greatly exceed this number. The boat-building industry has been exceptionally brisk, all the builders having had their hands full. An element that tends to retard a still further development of the industry is the inability of builders to cope with the orders received. No orders for this class of vessel have been placed in the hands of builders by West Coast fishermen, but a commencement has been made in this direction by Shetland owners. Owing to the high prices obtained for herrings, the season—for fishermen—has been one of great prosperity. Line-fishing, particularly in the upper reaches of the Moray Firth, was prosecuted with a large measure of success. Haddocks, which had almost deserted the line-fishing grounds on the east and west coasts, were more abundant than for many years back. Fishermen attribute the success of this fishing in the Moray Firth to the closing of these waters against foreign trawlers. On the Shetland coast the line fishermen sustained a heavy loss of gear, which, together with stormy weather and a scarcity of bait, rendered the line-fishing a comparatively unremunerative one. In the catch of cod on the Caithness coast there is a considerable increase as compared with that of 1905. In consequence of the high prices obtained for herrings, hired hands, who were paid on the share system, secured substantial earnings, many West Coast fishermen having brought home from £20 to £40. The general adoption of the steam drifter is lessening the demand for hired hands, and the supply of such labour was far in excess of the requirements—so much so, indeed, that upwards of two hundred Lewis fishermen had to return home without engagements. Formerly, many of the sail-boats from Buckie and elsewhere were owned by one or two individual fishermen, the remainder of the crew being made up of hired hands. The falling-off in the demand for hired hands, along with a poor fishing in several of the West Coast districts, has induced large numbers to emigrate. Every season it is becoming more apparent to the fishermen of the east and west coasts that the prosecution of the English herring fishing is not to be neglected. The number of boats which proceeded to Yarmouth and Lowestoft was larger than in any previous year; but, owing to a shortage in the catch of herrings, the earnings of fishworkers were slightly under those of last year. Coopers were fully employed during the spring and winter months, and satisfactory wages were earned by them.

With regard to the herring fishing on the West Coast, although Stornoway and Loch Broom districts had largely decreased catches as compared with those of 1905, at Barra and Loch Boisdale the fishing was the most successful which has been experienced since 1870.

Winter Herring Fishing.

The winter herring fishing at Stornoway has now become of more importance than the summer herring fishing. The total landings were 40,717 crans. The fleet engaged was mostly composed of steamers from East Coast ports—the highest number working in one week being 130 and of sailers, 53. Of the latter number, about one-half were local boats. The shoals, which were particularly heavy, were struck upon the same grounds as in previous seasons—from 20 to 28 miles north-west of the Butt of Lewis. Shots of from 100 to 160 crans were quite general. The most successful steamer earned £625. The earnings of a number of the vessels ranged from £300 to £500, while those of the most successful sail-boat were £200. For the past two winters the Lewis fishermen have not taken advantage of the herring fishing prosecuted on the west side of the island. Of the winter's catch, the local craft did not bring in 1000 crans. A trial was made in forwarding the herrings to the Continent in a fresh state, and a steamer was specially chartered for this purpose; but, owing to stormy weather and the irregular prosecution of the fishing, only one consignment of 1100 boxes was despatched. The venture proved unremunerative, and the enterprise had to be abandoned.

Trial in forwarding Fresh Herrings to Continent.

Stornoway Close Time Annulled

Disappointing Results of Herring Fishing.

The summer herring fishing opened in May. About the end of April, while the herring fishing was being prosecuted at Barra, Shetland, and East Coast ports, the native fishermen were asked by the traders of Stornoway to annul the close time, adopted by them some 19 years ago, so as to keep pace with their neighbours; but they refused even a compromise in the matter, with the result that the Town Council of Stornoway, for the good of the community, hired two steam drifters to break through the close time. The results, however, of the herring fishing were most disappointing, the greater part of the fleet, particularly the local craft, doing practically little or nothing. There were several stranger curers who did not cure a single barrel of herrings, and for curers and kipperers the season was, financially, a bad one. Many fishermen attribute the failure to the prosecution of the winter herring fishing; but in 1876, long before the winter herring fishing was of such importance, and again in 1893 and 1894, there were comparative failures. Others maintain that a proper trial is not being made. For several seasons back, particularly since the Shetland fishing has assumed such dimensions, and more particularly since the introduction of the steamers, the fleet has become erratic in its movements. During the latter part of June, when the Stornoway fishing was generally at its best, only a few of the local craft (second-class boats) now remain on the coast. In 1906, owing to the poor catches obtained, nearly all the native craft proceeded to Shetland and the East Coast. Altogether 60 boats had left the district, as against 52 in 1905. The majority of these earned £300 per boat. Two of the boats earned £440 each.

Earnings of Lewis Fishermen on East Coast.

Barra Herring Fishing: most successful since 1870.

Record Earnings by Native Crews.

On the other hand, the summer herring fishing in Barra district was the most successful experienced since 1870. The average price per cran was 31s. 2d., as against 49s. 3d. in 1905. The difference in price was due to a heavy fishing which was brought in early in May, and which almost blocked curing operations. In May the shoals were struck in the neighbourhood of the Island of Canna. Although there were several shots caught off St. Kilda which realised from £100 to £200, the Atlantic grounds only yielded very moderate results. In quality, the herrings taken from the Minch grounds were superior to those landed for many years back. Altogether, 140 steamers and 300 sail-boats, representing in boats and material upwards of half-a-million sterling, were employed in Barra district. The earnings of a number of the steamers ranged from £400 to £480. The fleet working from Loch Boisdale was equally successful, and the local fishermen had a remarkably good season. Several Eriskay boats earned between £600 and £700; while a considerable number earned from £300 to £500. With regard to the herring shoals very little is known, but it has been demonstrated that from May 1905 up to the end of 1906 a large body of herrings has been moving about on grounds in the neighbourhood of Loch Boisdale and the Islands of Canna, Coll, and Tiree; unfortunately, for weeks on end, the boisterous nature of the weather suspended fishing operations.

Failure of Herring Fishing in Loch Broom and Loch Carron and Skye districts. Importation of Cured Herrings.

The herring fishing in Loch Broom and Loch Carron and Skye districts was practically a failure. To meet the local consumption cured herrings were imported from Loch Boisdale and Loch Fyne. The effects of the failure have been felt, not only in the locality, but also in the neighbouring districts. Boisterous weather during the latter part of the year discouraged the fishermen of Loch Broom from operating outside the headlands. For ten years previous to 1904 the herrings had almost deserted the loch. In the catch of white fish there is a slight decrease, but an increase in value. Owing to the scarcity of herrings on the Skye coast the attention given to line-fishing was greater than for a series of years back, with the result that the landings show an increase of several thousand cwts. over those of the preceding year.

White Fish Fishing at Mallaig. Remunerative Earnings by Steamers.

In Fort-William district there was practically no herring fishing. About three-fourths of the quantity of white fish caught in the district were landed at Mallaig. The fleet employed consisted chiefly of sail-boats and steamers from East Coast ports. Two of the latter vessels earned £482 and £425 respectively, while the most successful sail-boat earned £360. Stormy weather during the month of February seriously interrupted fishing operations.

Early Herring Fishing in Shetland. Poor results.

Great preparations were made in Shetland for the early herring fishing in anticipation of another heavy season's work. On the west side of the island it was practically a failure; while at Baltasound, where a large fleet of steamers and boats had congregated, it fell far short of the catch of 1905. At both these stations fishermen, curers, and others interested had a most disappointing and unprofitable season. A number of the Morayshire crews returned home early in July to refit for the summer herring fishing on the East Coast, and although a few had made from £100 to £200, the average earnings per boat for the season would not exceed £30.

Record Earnings of Crews working from Lerwick.

The fleet working from Lerwick did remarkably well—thus, in a measure, counterbalancing the falling-off elsewhere. Although the total catch was about one-third less, its value was almost the same as that of the preceding year. The average price per cran was slightly over 26s., as compared with 18s. in 1905. Most of the fishermen, on account of the high prices, had a very remunerative season. The greater share of the season's earnings went to steam drifters from the East Coast and English ports, several of which netted close upon £2000. The native boats met with varied success, the earnings of the best fished being about £1000, while a number averaged over £500. Owing to a fall in the market for cured herrings at the close of the season, an unusually large quantity was left in first hands, and at the end of December it was estimated that between twenty and thirty thousand barrels remained to be shipped, a state of matters almost unprecedented in Shetland.

Unprecedented Quantity of Cured Herrings on hand at Close of Season.

Orkney District. Decrease in Catch of Herring and White Fish, but Increase in Value.

Extensive preparations for the herring fishing were also made at Stronsay and other stations on the coast of Orkney. The total catch, however, fell short of the previous year's by close upon 6000 crans. In the value there was an increase of about £7000. The quality of the herrings throughout was satisfactory. In the quantity of white fish landed there was a decrease of 3000 cwts. Lobsters show an increase of 52 hundreds, as compared with the previous year's catch. The extension of the pier at Holm was of considerable advantage to the boats discharging their catches at that station.

Wick District. Early commencement of Herring Fishing. Unprecedented Catch in June.

The early herring fishing at Scrabster was a complete failure. Although the catch of herrings at Wick was 10,000 crans less than that of 1905, the industry, financially, has not suffered to any great extent, there being only a slight decrease in value. During the past two years a general commencement has been made in June. The landings for that month alone, for the season under review, totalled 40,000 crans, or more than one-third of the season's catch, the quality also being satisfactory. For the first time in the history of the port several Irish girls, belonging to the neighbourhood of Downingsbay, arrived at Wick for the purpose of gutting and packing the herrings. The poor catches in August, due greatly to weather conditions, account for the falling-off in the quantity branded. Exportations throughout the season were brisk, curers selling out as soon as the curing process was completed. Cod, which had been exceedingly scarce for a number of years, were again found on the favourite grounds in the Moray Firth, and good catches secured; while haddock fishing also showed signs of revival, the total landings showing an increase of over 1000 cwts. as compared with those of the previous year. During the season the Caithness fishermen devoted more attention to great-line fishing than they have done for several years past.

Cod and Haddock plentiful in Moray Firth.

Earnings of Steamers and Sailers at Yarmouth and Lowestoft.

Thirty-one vessels—13 steamers and 18 sailers—belonging to the port prosecuted the herring fishing at Yarmouth and Lowestoft. Although the sail-boats were not so successful as in 1905, the average earnings of the steamers were close upon £160 above those of the preceding year.

Helmsdale Fishermen find Employment as Hired Hands.

A considerable number of fishermen belonging to Helmsdale district left home about the end of April to join boats belonging to other districts as hired hands. Twenty-two boats belonging to the district were engaged in the herring fishing at Shetland. All the steamers were also employed there. The sail-boats met with varied success. Good earnings were, however, secured by the steamers, one of which earned £1600. There were 9 steamers and 4 sail-boats at the English herring fishing. In 1905 no sail-boats proceeded to England. Haddocks were more abundant on the coast than has been the case for several years back; but, owing to the attention given to the herring fishing at Yarmouth, fewer boats were this season employed at line fishing.

Success of Avoch Fishermen.

With the exception of the Avoch men, the majority of the fishermen belonging to Cromarty district find employment on the East Coast and at Shetland as hired hands. Practically the whole of the herring fleet belongs to Avoch. Nine boats prosecuted the herring fishing at Downingsbay, Ireland, and 14 at Castlebay. Five of the boats at Ireland netted from £200 to £350 each; while the earnings of those at Castlebay ranged from £40 to £300. Within recent years the fishermen of this creek, in contrast to their neighbours in Easter-Ross, who have run out of boats and gear, have bettered themselves considerably. Besides owning first-class boats, a number of them possess, individually, large fleets of nets. They follow up the fishings from Ireland to Great Yarmouth. The extension of the harbour, which is practically finished, will be of great advantage to the fishermen in ballasting, shipping, and landing their material. Fourteen boats fitted out for the English herring fishing, as against eleven in 1905. The success which attended their operations was slightly better than that of boats of the same class belonging to other districts.

Haddock Fishing at Cromarty unusually good.

Remunerative earnings were made by Cromarty fishermen at line fishing. During the months of October and November the success of the crews employed at haddock fishing was unusually good. Fishermen report that haddocks have returned to their former haunts in the Moray Firth, which they attribute to fewer trawlers being at work in those waters.

Increase of Steamers in Buckie district.

In Buckie district there is an increase of 33 steamers as compared with last year's fleet. Twenty-six of these were built in the district, representing in value upwards of £67,000. To the surprise and satisfaction of the fishermen of the district, the shoals of herring made their appearance off the coast at a much earlier period than usual, and the small fleet operating met with a much larger measure of success than in 1905. In quality the herrings surpassed any that have been landed in the district for many years back, and the fish realised satisfactory prices. In July calm weather seriously interfered with the progress of the fishing.

Record Earnings. Result of Season's Success.

The greater part of the fleet prosecuted the herring fishing at Fraserburgh, Peterhead, and Shetland. The average earnings of the sail-boats were £320, and of the steamers £1050. The best sailer earned £870, while the amount secured by the most successful steamer was £1700. In October 101 steamers and 225 sail-boats proceeded to Yarmouth and Lowestoft. The steamers secured an excellent fishing, while the sailers were only moderately successful. It is estimated that upwards of £400,000 have been earned during the year by the fishermen of this district at the various fishings on the Scottish and English coasts. As a result of the season's success, some fifty new steamers are being negotiated for with Scottish and English builders.

Herring Shoals return to Upper Reaches of the Moray Firth.

Boats at Yarmouth and Lowestoft.

The result of the herring fishing in Findhorn district was most gratifying. The shoals were struck on grounds in the upper reaches of the Moray Firth, where they have not been found for many years back. Another feature of the fishing was the early appearance of the fish in the firth. The quality of the herrings was also considered satisfactory, and good prices were obtained. The herring fleet working at the great centres on the East Coast and Shetland had an excellent season. In autumn, 19 steamers and 120 sail-boats prosecuted the herring fishing on the English coast, as against 16 and 110 respectively in 1905, their success being similar to that of the boats belonging to the neighbouring districts.

Building Industry. Patent Slip erected at Lossiemouth.

Three steamers were this season built in the district, and orders for about a dozen new vessels have been placed with builders at Aberdeen, Portgordon, Yarmouth, and Lowestoft. The local builders have also booked orders. A patent slip, for the convenience of repairing, cleaning and painting the vessels, has also been erected at Lossiemouth.

Large Increase in Catch of Haddock.

In the catch of white fish there is a large increase over the figures of 1905. Haddocks, the landings of which show an increase of upwards of 5000 cwts , were in large shoals on the coast.

Success of Herring Fishing at Inverness. Remunerative Prices.

Cut Herrings. Quantity exported.

Sprat Fishing. Poor catch.

During the latter months of the year the herring fishing in the Beauly and Inverness Firths opened a month earlier than usual, thus following the lead of the whole east coast. The fishing was prosecuted with a large measure of success, the total landings at Inverness being 3295 crans and the average price per cran 16s. 1½d., as compared with 2162 crans at 8s. 3d. in 1905. The high price was maintained by the competition of foreign buyers with local dealers. Close upon 400 barrels of "cut" herrings were exported this season by a Scottish curer. This is a method of curing small herring, for the continental and American trade. originated by an enterprising Norwegian firm, who, about ten years ago, introduced this method of cure at Inverness. The sprat fishing was almost a failure. For those landed there was a keen demand and prices ruled high.

Mackerel Fishing on the West Coast.

In the early part of the year mackerel were abundant off the Lewis coast and good catches were secured. Again in summer the fish made their appearance in the Minch. In Barra district there is an increase of several hundred cwts. upon the catch of the preceding year. Although mackerel were plentiful in the South Uist lochs, the fishing was not vigorously prosecuted owing to the lack of buyers. On account of the poor prospects in the American markets, two stranger firms who cured in previous years did not open stations in 1906. On the north coast of Skye this fishing has been the most successful for several years back. Practically the whole of the catch in Loch Carron and Skye district was despatched to the southern markets in a fresh state.

Inauguration of Marconi System with Outer Hebrides.

Within recent years the telegraph cable in connection with the Outer Hebrides has so often broken down that the Post Office Department decided to erect a Marconi wireless station at Loch Boisdale, to connect with a similar station at Tobermory.

JOHN SKINNER,
Assistant Inspector of Sea Fisheries.

INVERNESS, *7th January* 1907.

II.—EAST COAST.

Eyemouth District.

General Remarks.

The principal feature of the year's operations was the unprecedented success of the summer herring fishing. Including the winter fishing, which was about an average one, the aggregate landings of herrings showed an increase of 20,244 crans as compared with the catch of 1905, which had been a record year. To curers the summer fishing proved highly satisfactory, but unfortunately losses, more or less serious, were sustained by those who extended their operations to Yarmouth and Lowestoft. Success attended the efforts of the fishermen both at the home and other herring fishings, several crews having aggregate earnings of over £2000, the estimated average earnings per crew being £755. These figures speak well for the energy and enterprise of the fishermen. Although fewer boats engaged in line fishing in the Scottish section of the district, the returns were slightly above those for 1905, while the English section exhibited a decrease.

Means of Capture.

The changes in the means of capture were few and unimportant. Four second-hand boats of the first class were transferred from the Scottish to the English section of the district, while two new boats of the same class were added to the Eyemouth fleet. Recognising the advantages of steam power, Eyemouth fishermen have placed orders for the construction of three steam drifters, two of which are to be built at Eyemouth. One is now ready for launching, and will be the first steam fishing vessel belonging to the district.

Winter Herring Fishing.

The winter herring fishing, which continued during the first three months of the year, was prosecuted almost exclusively by local crews. The principal fishing grounds were from 2 to 15 miles off St. Abbs. As contrasted with the previous year's, the returns exhibited a decrease of 1368 crans in quantity, but an increase of £772 in value. Prices ranged from 10s. 6d. to 48s. per cran, with an average of 24s. 9d., as compared with 21s. 8d. in 1905. A new departure in this fishing was the curing and exporting of about 500 barrels of the catch.

Early Herring Fishing.

A most successful fishing was landed during the month of June by a fleet of over 40 boats. The quality, however, was poor, the average price being only 9s. 2d. per cran. Even at this early date over 1200 barrels were cured and exported, but the venture was not altogether a successful one.

Summer Herring Fishing.

Following the good results obtained during June, the fishing continued with unbroken success up till the middle of September, the only drawback being a prevalence of calm weather, which prevented the boats from making daily landings. The quality throughout was very inferior, but fortunately the demand for cured herrings was keener than usual, so that prices both for cured and fresh fish were well maintained. The average price per cran was 14s., as compared with 15s in 1905. The principal fishing grounds were from 5 to 20 miles N.E. of the Farne Islands. The total landings from 1st June of 107,068 crans constituted a record for the district, the next best year being 1884 with a catch of 84,112 crans. With such a heavy fishing curers' stocks soon became exhausted, the result being that over 60,000 barrels were purchased from outside the district, principally from Aberdeenshire. Inquiries have been made for new stations, and it is hoped that a few names will be added to the permanent list of curers by next season.

Exportation.

Besides the 27,238¾ barrels of herrings exported direct, there were 49,028 sent coastwise, and 20,704 by rail to Leith for exportation to the Continent.

Haddock Fishing.

The haddock fishing exhibited a slight improvement on that of 1905, but this industry is now mostly confined to small boats, only four large boats having been engaged in it during the past year. Prices ranged from 5s. to 35s. per box of 6 stones, the average being 17s. 2d. per cwt.

Crab and Lobster Fishing.

The returns of the crab and lobster fishings were slightly below those for 1905, this being due to the fact that the Burnmouth fishermen did not prosecute this fishing during the months of November and December. Prices ranged from 1s. 9d. to 4s. 6d. per score for crabs.

Barrel-making and Boat-building.

Both coopers and boatbuilders were fully employed throughout the year, and for both the prospects of the present year are bright.

English and Irish Fishings.

Owing to the successful home fishing fewer boats took part in the early summer herring fishing at English and Irish ports than in 1905, but the number—56—at the autumn fishing at Yarmouth and Lowestoft was practically the same as in the previous year, while the aggregate value of the catch showed a slight increase.

Table showing the Number of Boats employed in each week during the Herring Fishing Season of 1906, the Highest Shots and Weekly Landings, with the Prices obtained for Fresh and Cured Herrings.

Week ended	Number of Boats.	Highest Shot.	Total Catch for Week.	Prices for Fresh Herrings.	Average Prices of Cured Herrings.
1906.		*Crans.*	*Crans.*	*Per Cran.* s. d. s. d.	*Per Barrel.*
7th July	58	43	2,522	3 3 to 40 0	
14th ,,	70	81	4,257	4 0 to 33 0	
21st ,,	89	95	7,049	5 0 to 28 0	C. Full. 33s. 7d.
28th ,,	146	90	11,345	5 0 to 24 0	,, Mat Full. 30s. 9d.
4th Aug.	183	154	14,943	6 0 to 39 0	
11th ,,	161	160	12,270	4 0 to 24 0	,, Spent. 28s. 1d.
18th ,,	199	128	15,277	4 0 to 2 0	,, Mattie. 29s. 5d.
25th ,,	180	130	8,789	7 0 to 25 0	Branded Herrings 31s. 0d.
1st Sept.	175	188	10,339	10 0 to 29 0	Un-branded. From 2s. to 5s. below the above prices.
8th ,,	175	78	7,419	15 0 to 27 0	
15th	128	40	3,513	14 0 to 28 6	
22nd ,,	18	20	144	22 0 to 26 0	
29th ,,	4	35	188	20 6 to 24 0	

David Rosie,
Fishery Officer.

Berwick, 9*th January* 1907.

Leith District.

General Remarks.

The results of the different branches of the fisheries carried on in the district for the year 1906 were, on the whole, satisfactory. The aggregate quantity and value show a slight increase on the returns of preceding year. This is entirely due to the landings from trawl vessels. In fact, 84 per cent. of the fish landed is taken by trawl vessels.

The district net and line fishings were attended with somewhat unsatisfactory results. Still, although the fishermen were not so fortunate at the herring fishing on the Scottish and English coasts as in 1905, their earnings for the year were up to the average.

Means of Capture.

The means of capture returns relating to sail boats show practically no change from those of 1905. Steam power for net and line fishing has been introduced into the district for the first time by utilising five of the smaller class of trawl vessels for that purpose—three being employed at line fishing and two at herring fishing. Several steam drifters have, since the close of the season, been contracted for and will be ready next summer.

Winter Herring Fishing.

The winter herring fishing prosecuted from Dunbar and Newhaven by 30 to 50 boats during the period from January to March was fairly successful. About 60 per cent. of the herrings landed during that period were exported to the German markets in a fresh or iced condition.

Summer Herring Fishing.

No regular fleet of boats prosecute the summer herring fishing in the district, the larger class of local boats preferring to leave home and fish at the chief ports on the Scottish and English coasts. The highest number of boats employed in any one week was only eight, and the total catch amounted to 1357 crans, all of which were used in a fresh condition or kippered.

Sprat Fishing.

The sprat fishing was practically a failure. The small quantity landed was obtained by boats working in the upper reaches of the Firth of Forth with bag-nets. Drift-net fishing, when tried, proved a complete failure.

Exports of Cured Herrings.

The facilities for the rapid conveyance of cured herrings from Leith to the Continent by the regular trading steamers is a great inducement to exporters to send their herrings here for shipment, and the exportation of cured herrings throughout the whole year, particularly during the summer months, was considerable. Large quantities of early-caught herrings were sent weekly, chiefly to German ports. The following table shows the total exportations for the past five years:—

Years.	BARRELS OF CURED HERRINGS EXPORTED.			
	Continent	Ireland.	Out of Europe.	Total.
1902	242,337	1093	740	244,170
1903	184,550	581	...	185,131
1904	208,640½	1328	...	209,968½
1905	263,109¾	672	...	263,781¾
1906	322,889½	523	...	323,412½

Trawling.

The trawling industry was carried on with great energy during the year. Five new vessels of the largest type were added to the fleet, but this increase was counterbalanced by the withdrawal of five of the smaller class to engage in net and line fishing, and the total number of vessels remains the same as in last year.

In connection with this industry two net factories, employing 80 women, and an ice factory, were built and equipped with the latest machinery during the year. These establishments are owned and managed by local trawl owners.

The fishing grounds resorted to by the largest and best vessels, and from which the better class of fish is obtained, range from 50 to 60 miles in a N.E. direction from the May Island, whereas the smaller class of vessels work more inshore, large quantities of small haddocks being caught by them.

I subjoin a comparative statement showing the quantity and value of fish landed by trawl and line, and the number of trawl vessels employed, during the years 1902 to 1906.

Year.	Trawl Vessels employed.	Trawl.		Line.	
		Cwts.	£	Cwts.	£
1902	43	227,861	121,138	24,105	18,637
1903	48	241,861	134,569	34,491	20,470
1904	53	318,496	153,865	33,999	18,471
1905	55	295,960	157,908	31,931	19,196
1906	55	375,796	167,032	30,069	20,228

Boatbuilding. The boatbuilding trade was exceptionally dull during the first six months of the year, but since the close of the herring season contracts have been entered into, and are now being executed, for the building of several steam drifters for local fishermen. In connection with this industry, a number of boats built in other districts get their engines and boilers constructed and fitted into them here by local engineers, one firm at present having on hand no fewer than eight boats to fit out in this way.

English and Irish Herring Fishings. There were 54 district boats employed at the English herring fishing, and 27 at the Irish herring fishing. The average earnings of those engaged at the former were £350 and at the latter £80

The number of quarter-cran baskets branded during the year was 12,901. A considerable number of these baskets are now sent to fishing stations on the English coast during the autumn fishing, where they are used by English as well as Scottish fishermen.

Casualties. The loss of fishing material by sail boats, amounting in all to £930, was principally due to the bad weather at the English herring fishing, one boat having lost her entire drift of nets, while most of the other boats suffered to a greater or less extent. The total loss sustained by trawl vessels amounted to £5510.

Fortunately no lives were lost at any of the fishings during the year.

James Stewart,
Fishery Officer.

Leith, 17*th January* 1907.

Anstruther District.

General Remarks.

The year just closed can fairly be described as a satisfactory one for the fisheries of Anstruther district. The returns of the total catch and value of fish landed—the third highest on record—have been exceeded only by those of the abnormally successful years of 1900 and 1902. Compared with that of the preceding year, the value shows an increase of over £18,000.

Means of Capture.
Sailing Boats.

The number of first-class sailing boats is gradually falling off owing to the more general adoption of the steam drifter. A slight increase in the number of smaller-sized boats is due to an improvement in small-line fishing.

Steam Vessels.

The success of the local steam drifters during the past two years has induced a number of the district fishermen to give orders for steam-propelled vessels, and, during the latter half of the year, there was quite a boom in steam-drifter building. In addition to four vessels added to the fleet, at the close of the year about twenty vessels were on order for district crews, and several crews were unable to get their orders placed on account of the builders' being unable to guarantee delivery before the autumn of the present year.

Auxiliary Propulsion.

An interesting experiment was made at Anstruther during the past year. The experiment consisted of fitting an ordinary sailing boat with a turbine engine as a means of propulsion. The engine is, however, meant to be more supplementary than auxiliary, the aim being to make a combination of the two powers—sail and steam—when there are light winds, while, when there is plenty of wind, the sailing qualities of the boat would be fully utilised. Several satisfactory trials were made. In calm weather a speed of 6½ knots was attained. With a light breeze, which drove the boat with sails alone at 5 knots, a speed of between 9 and 10 knots was attained by means of both engine and sails. The engine is placed low in the boat, and it takes up comparatively little space. It runs very smoothly, and with no vibration or noise. It is said to be very simple, and fishermen would soon learn to take charge of it. As it was late in the season before the installation was completed the boat was not sent to the fishing.

Winter Herring Fishing.

The winter herring fishing continues to be the most important fishing in the district. It yielded close on 60 per cent. of the total catch and value of white fish landed in the district during the year. About the usual number of local crews were engaged, and, among the strangers who took part in the fishing, all the ports from Nairn to Eyemouth were represented. During the first part of the season herrings were scarce, and, although later on the catches improved, the season closed with a shortage of close on 5000 crans compared with the corresponding season of last year. Owing, however, to a better demand for herrings, and, in consequence higher prices, the value of the catch shows an increase of nearly £10,000. A portion of the catch was again cured gutted and exported to the Continental markets.

Summer Herring Fishing.

The catch for this season was the best recorded for the past thirty years. About the end of July dense shoals of herrings were located east and north-east of the May Island, and the district crews who usually fish from Aberdeen found it more convenient to land their catches at Anstruther. The fishing continued successful during August and the first week of September. Unfortunately, owing to calm weather, a large portion of the catch was landed in bad condition, and prices ruled low. The catch for the season amounted to 14,870 crans, compared with 4881 crans for the corresponding season of 1905. Most of the herrings were cured gutted, and all the available ground about the harbour was utilised for curing purposes.

Great-line Fishing.

Great-line fishing is yearly receiving less attention from the district fishermen, who now prefer to follow the herring fishing all the year round. The catches of the local steam fishing vessels are usually landed at stations outside the limits of this district.

Small-line Fishing.

Small-line fishing was attended by satisfactory results throughout the year, and the catch of haddocks shows a considerable increase.

Shell-fish Fishing.

Compared with the preceding year, the crab and lobster fishing was less successful. Crabs appear to be gradually getting scarcer on the Fife coast. There was a good demand for mussels for bait during the year. The quantity dredged is in excess of that for 1905.

Sparling Fishing.

Sparling fishing, which is carried on from Newburgh, was unremunerative.

English Fishing.

Forty crews from this district engaged in the early and late summer herring fishings at Shields with fair success, the average earnings per crew being £300.

At the autumn herring fishing on the English coast 136 crews from this district were engaged. The season proved a highly successful one for steam drifters, but, owing to stormy weather, sailing boats were unable to fish regularly, and their crews experienced rather an unsuccessful season. The earnings of the steam drifters varied from £493 to £1300, while the average earnings of sailing boats amounted to only £200.

Irish Fishing.

Four crews fished on the west coast of Ireland during the autumn season. Their earnings amounted to £180 per crew.

Boatbuilding.

With the strong demand for steam drifters the boatbuilding trade is again in a healthy state. All the local builders have secured orders which will keep their workmen employed during the greater part of the present year.

Casualties.

Four lives were lost during the year in connection with the fisheries. Two fishermen were lost during the winter fishing season—one through falling overboard, the other through being knocked overboard by the sail. A Cellardyke fisherman was washed overboard from a boat employed at great-line fishing, and a St. Monans fisherman fell overboard and was drowned from a boat employed at the summer herring fishing.

Barometers.

All the barometers, which were supplied by the Meteorological Office to fishing creeks in this district, are in good order and are now inspected periodically.

William Keir,
Fishery Officer.

Anstruther, *4th January* 1907.

Montrose District.

General Remarks.

Both as regards quantity and value, the aggregate results of the fishing industry in this district for the year 1906 show a slight improvement on the returns of the preceding year.

Owing to the enhanced prices of herrings, the value of net-caught fish was considerably greater; line-caught fish also exhibited an upward tendency, while, on the other hand, the returns of fish taken by trawlers were slightly under those of 1905.

The value of shell-fish landed was greater than for the past five years.

Means of Capture.

Several of the older class of boats were broken up or otherwise disposed of during the year. A steam fishing vessel, which had been engaged as a carrier steamer for the past few years, was fitted out by a Buckie crew and employed in the various herring fishings from the month of July. As this vessel is registered at Montrose, it has been included in the returns of this district.

Sprat and Herring Fishing in the Tay.

The sprat and herring fishing in the Tay was a complete failure. Notwithstanding that the usual fleet of boats made repeated trials, it was only on rare occasions that any individual shot amounted to more than a cran, takes generally ranging from a basket downwards.

It is difficult to account for this great scarcity, but, whatever the cause may be, it is quite evident that the fish did not frequent the waters of the Tay in the same abundance as in former years.

Summer Herring Fishing.

Both in respect of quantity and value, the results of the summer herring fishing showed an improvement on those of the two preceding years.

A few boats commenced operations in June, but the fishing proper did not begin till well on in July and continued to the first week in September.

In addition to the regular fleet of sailing craft, several steam drifters landed their takes in this district.

Quality.

The quality fell far short of what could have been desired, the bulk of the catch being composed of herrings of a very soft nature, which rendered their handling a difficult and delicate operation.

Prices.

Prices were well maintained throughout the season, an average of 20s. 9d. per cran having been paid to the fishermen, as compared with 14s. 6d. in 1905, and 10s. 5d. in 1904.

With a brisk demand for the cured article prevailing, prices were inclined to advance with the season, but even under these favourable conditions the profits of the curers were by no means large, owing to the comparatively small proportion of herrings suitable for the more valuable brands.

Line Fishing.

Haddocks were more plentiful than they have been for a number of years, but they were, for the most part, of a small to medium size, large haddocks being extremely scarce. Codlings, on the other hand, were not nearly so plentiful.

It is satisfactory, however, to note that, in the aggregate, the results of the previous year's line fishing were fully maintained during the year which has just closed.

Trawling.

Trawling was carried on by the same fleet of vessels as was employed in 1905.

The total number of arrivals was 1561, with an average catch per arrival of 54½ cwts. and an average value of nearly £26, as against 1483 arrivals, 59 cwts. and £29 respectively, in the preceding year.

Shell-fish

The output of mussels from the beds situated in the Tay was considerably greater than in the previous year, but this increase was almost counterbalanced by the falling-off in the quantity taken from the South Esk.

Lobster and crab fishing was much more successfully prosecuted, crabs especially showing a marked increase in the number captured.

English Fishings.

Fifteen local boats prosecuted the great-line fishing on the north-east coast of England during the spring of the year, but met with indifferent success, their average earnings working out at about £45 per boat.

At the close of the summer fishing a fleet of 75 sailing boats from this district prosecuted the herring fishing at Scarborough, and 21 of these also took part in the fishing on the Norfolk coast later on in the year. Their earnings ranged from £40 to £600, which gave an average of £172 per boat, as compared with £141 the previous year.

Boatbuilding.

The demand for sailing craft is meantime at a standstill, but orders for the construction of ten steam drifters and one trawler for owners residing in other districts have been placed in the hands of shipbuilders at Dundee.

A new steam drifter for this district has been contracted for at Aberdeen.

Barrels.

Barrel-making was actively carried on, and coopers have bright prospects of constant employment for some time to come. Nearly 12,000 empty barrels were dispatched to various ports on the Scottish and English coasts.

Casualties.

Eleven fishermen lost their lives at sea, and one boat appeared twice in the casualty list.

In the first instance the boat was caught in a north-east gale while riding at her nets about 25 miles north of Foula. She was struck by a heavy sea which carried two men overboard and broke the boat adrift from her nets. Later on in the season, about the middle of July, this same boat was caught in a gale on her passage home from Shetland, and neither boat nor crew of seven men were again heard of.

The other two lives lost were those of fishermen who were killed by the mast breaking and falling upon them.

The loss and damage to boats and gear were considerably greater than last year.

Wm. Nisbet,
Montrose, *7th January* 1907. *Fishery Officer.*

Stonehaven District.

General Remarks.

After a number of unprofitable and gradually declining years in this district, it is highly satisfactory to have to record substantial increases in both the herring and line fisheries for 1906. A comparison with last year's figures shows an aggregate increase of 8298 cwts. in quantity and £4417 in value.

Means of Capture.

No changes of any note have occurred in the tonnage and value of fishing vessels, and the fishing material remains practically the same as last year.

Summer Herring Fishing.

At Stonehaven the summer herring fishing was prosecuted by a small fleet of about 20 sail boats. The crews worked energetically during the months of July and August, and had a remunerative return for their season's work. Owing to the keen and increasing demand for cured herrings, the prices obtained on delivery were fairly high. Herrings were much more plentiful on the offshore than on the inshore fishing grounds, and owing to this circumstance, and the prevalence of calm weather, a number of the crews were often unable to reach harbour in good time. When, however, the weather conditions suited, good catches were regularly landed.

Curing for export accounted for the greater portion of the herring catch, but kippering and freshing for the home markets were also carried on.

Shetland and English Herring Fishings.

A small number of local crews prosecuted the early herring fishing at Shetland, and were moderately successful. Eleven sail boats also proceeded to Scarborough and Grimsby after the close of the local summer fishing. The crews' earnings were only fair, averaging about £154 per boat, the highest being £282.

Haddock Fishing.

Haddock fishing was more successful than in 1905, the returns showing an increase of 5082 cwts. in quantity and £1712 in value. The bulk of the increase fell to Stonehaven. A marked and gradual decline, extending over a number of years, has been going on in the three small fishing villages to the south of Stonehaven, where at one time an important haddock fishing was carried on. The inshore fishing is now almost extinct, and fishermen have of late been turning their attention to the capture of crabs, which appear to be very plentiful along the coast.

Crab and Lobster Fishing.

The crab and lobster fishermen were regularly employed, and were moderately successful. The year's returns show a slight increase on those for 1905.

Harbour Improvements.

The breakwater at Stonehaven, which has been in course of erection for some time, is now almost completed, and a considerable addition has been made to the existing works. Deepening operations are also being carried on. The extensions and improvements will be of considerable benefit to the fishing community, and, it is to be hoped, will bring about a much-needed improvement in the prosperity of the fishing industry of this district.

Donald Skinner,
Fishery Officer.

Stonehaven, 16*th January* 1907.

Aberdeen District.

General Result.

The principal fishings of this district are trawling, great-line fishing, and herring drift-net fishing. All were highly successful.

Year's catch of White Fish.

The total quantity of white fish landed (herrings excluded) during the year was 1,555,340 cwts., value £844,927, and of this trawling contributed close on 88 per cent. of the weight, and 87 per cent. of the value.

The Trawl Fleet.

Trawling was again very successful. At the close of the year the fleet of trawlers working from Aberdeen numbered 208 vessels, an addition to the fleet of the preceding year of 14. There were, as formerly, occasional landings from other British and foreign trawlers not included in the permanent fleet.

Comparatively small increase in Trawl catch.

Although the quantity and value of trawled fish landed during 1906 (see Appendix) was the greatest on record, and therefore kept up the unbroken record of advance, the increase upon the preceding year's results was a comparatively small one, amounting to only 41,011 cwts. in quantity, and £2819 in value.

Progress of Trawl Fishing in last 11 years.

In further amplification of this subject the following figures afford details of the trawl fishing for the year under review, as well as for the preceding ten years :—

Years.	Number of Arrivals.	Average Duration of Voyage.	Average Weight of Catch.	Average Value.
		Days.	*Cwts.*	£
1896	5,543	...	67·4	42·1
1897	5,788	...	75·3	46·2
1898	6,758	...	84·4	51·1
1899	7,522	...	91·4	59·1
1900	7,132	...	110·4	72·9
1901	8,390	...	118·2	74·3
1902	8,951	...	123·5	70·7
1903	9,423	...	127·4	67·6
1904	8,726	5·2	146·7	72·8
1905	8,909	5·27	149·9	82·3
1906	8,896	5·65	154·7	82·7

Comparative results of Trawl Fishing.

These figures show that 13 fewer voyages were made during 1906 than in the preceding year, that the average duration of the voyage was nearly half a day longer, the average weight of catch increased by 4·8 cwts., and the average value per voyage by £0·8.

Looking closely at the result for the year, and taking into account the fact that the fleet was greater by 14 vessels at the close of 1906 than at the corresponding period in the previous year, it does not appear that any real advance has been made; but, on the other hand, it is generally believed that the weather was less favourable for fishing during 1906 than for several years previously, and that is in itself a most important factor in the results.

Principal Areas where Fish Supply was obtained.

The areas from which the bulk of trawled fish is principally obtained have not varied much for some years. Again a large proportion was obtained off the Shetland Isles, the Viking, and Fladden Banks, and, in western waters, from near Sulisker, Suleskerry, North Rona, and the Butt of Lewis, as well as, in a lesser degree, from the grounds off Iceland and Faroe. A careful record has been kept, and the following statement will show, as in former years, the proportions of the catch obtained from certain areas:—

	1906.		1905.	
	Cwts.	£	*Cwts.*	£
From Home Waters,	1,097,892	652,105	1,066,306	660,149
„ Faroe, - -	54,792	26,902	173,311	49,971
„ Iceland, -	223,519	56,763	96,261	23,209
	1,376,203	735,770	1,335,878	733,329

From the above it will be seen that the aggregate increase in catch was 3 per cent. as compared with the preceding year's result. That figure also represents the increase from home waters. The supply from Icelandic waters shows the substantial increase of 132 per cent., but, on the other hand, the supply from Faroe has gone down by 216 per cent., and now more nearly approximates to the quantity brought from that quarter in 1904.

A considerable part of the supply from Iceland was brought in by German trawlers, which made, in the course of the year, 68 landings here.

Steam Line Fishing.

The work of the steam liners was also attended with success. The vessels made, in all, 1805 landings, and showed an average catch of 83 cwts., and average earnings per landing of close on £53. Although the aggregate landings of the steam line fleet amounted to 22,176 cwts. less than in the preceding year, the value, on the other hand, was greater by £2401, an increase which was almost entirely due to the higher value received for ling.

Principal Fishing Ground of the Steam Line Fleet.

In former years the liners used to obtain a large proportion of their catch from the Atlantic side, *i.e.* to westward of the Lewis, but this year the largest proportion came from the North Sea grounds, as fishing on the western grounds became unprofitable through the presence of swarms of dog-fish. It is also noteworthy that the weather was exceptionally unfavourable for line fishing during the spring and winter of 1906, That portion of the steam fleet which annually engages in the Scottish and English herring fishings, in their season, also secured a large measure of success.

Small-line Fishing.

The aggregate catch and value of fish landed by the small-line fleet from the inshore grounds has remained for years very light and almost stationary. This year it showed little change. In the Aberdeen section alone, where a fleet of about 30 yawls was at work, the aggregate earnings for the year were exactly £60 more than in 1905. This branch of the fishery has not been generally successful, and at best the men engaged in it have for years been making no more than a bare livelihood.

Herring Fishing.

Value of Herring Fishing.

The summer herring fishing was successful. The aggregate catch was greater than any for the past nine years; but its most successful feature was the large amount of money which the herrings realised. The daily prices ranged between 25s, and 30s. per cran, and consequent on these high rates the earnings of the fishermen were generally about the best ever obtained. The values of herrings landed at Aberdeen during 1905 and 1906 were respectively £52,221 and £116,438. In all other respects this fishery showed comparatively little change; the exports to the Continent, and the output in tinned herrings and kippers, continued on the usual lines.

Scottish Steamers at Icelandic Herring Fishery.

Following the successful initial trial at herring fishing in Icelandic waters which was made by two Scottish steamers in 1905, five steam trawlers, fitted with the requisite nets, proceeded to Iceland in June 1906 for the purpose of engaging in this fishery. The herrings did not appear until the end of July, and the fishing was practically concluded in about five weeks following. Both the purse-seine and drift-nets were used, but it was from the latter that the most uniformly successful results were obtained. In the comparatively short period of the fishing the five vessels made gross catches ranging from 1600 to 2000 crans each. The bulk of these herrings were cured in the Scottish method and exported, principally to Germany.

As yet, however, the Germans do not appreciate the Icelandic herrings, regarding them, for one thing, as too large.

Owing to the heavy working expenses, and the absence of a demand for herrings of such large size, it is to be feared that the venture did not turn out profitably.

Weather.

Storms frequently hindered the progress of fishing, especially during the spring and winter.

Loss of Life at Sea. Vessels Lost.

In all, 10 fishermen were lost from the fleet in the course of the year, and five steam fishing vessels and one yawl were totally lost, besides many minor losses of, and damage to, boats and fishing gear.

In a word, the fisheries were carried on with unceasing energy, and with a skill which none but British fishermen have as yet attained, and the successful result was a well-earned reward.

James Ingram,
Fishery Officer.

Aberdeen, 16*th January* 1907.

Peterhead District.

General Remarks.

The herring fishery returns of the district for the year 1906 exhibit a slight increase in quantity and a substantial increase in value as compared with those of the preceding year. To fishermen the results were highly satisfactory. Fishcurers and fishworkers also had a profitable season. Three-fourths of those connected with the industry engaged in various herring fishings outside the district. At several of these curers and fishworkers did not do so well, but to the majority of the fishermen, especially those engaged on board steam vessels, the results exceeded their most sanguine expectations.

Means of Capture.

The five trawlers belonging to Peterhead continued to land their fish at Aberdeen, where superior facilities exist. Nine-tenths of the district fishermen engaged in net fishing, and to the total landings herrings contributed 96·9 per cent. Owing to the increased distance at which the herring fishing is most successfully prosecuted, steam propulsion for fishing craft and an abundant supply of fishing gear of the very best quality have become essential. It is therefore gratifying to report that in these respects the district fleet was never so well equipped as during the year under review.

An outstanding feature in connection with the means of capture was the continued displacement of sailing boats by steam vessels for herring fishing purposes. During the year 11 steam drifters were added to the fleet, while 25 sailing boats were struck off the register. Several of these were broken up, others were sold to various places in Scotland, Ireland, and one to an English port. A number of the large sailing boats, recently built at a cost of from £720 to £850, were offered for sale at the close of the year at less than half the original cost.

In consequence of the success of the various herring fishings, and the high prices realised throughout the year, a large number of orders were placed for steam drifters. About twenty of these are to be delivered by the beginning of June 1907, and it is expected that ten more will be built by the close of the year—all with local capital. Nearly all are to be built of steel at a cost of from £3100 to £3400 each. The contract price for wooden vessels varies from £2400 to £2600. The largest and most expensive steel vessel is being built at Dundee, others at Aberdeen, Glasgow, and various places on the English coast. In addition, a company, called "The London and Peterhead Steam Fishing Company Ltd.," was registered at the close of the year with a capital of £25,000 for building steam drifters.

Early Herring Fishing.

In the latter part of May and throughout the month of June from 40 to 150 vessels engaged in herring fishing with remarkable success Contrasted with the results obtained in the preceding year by a similar number of boats, the catch exhibited an increase of 32,922 crans in quantity and £24,560 in value. Weather conditions were favourable for both sail and steam vessels, and the herrings were landed in excellent condition. Prices ruled high, the average being 16s. 6d. per cran, as compared with 12s. in 1905. The quality was exceptionally good, and a very large proportion of the catch was cured gutted for the Continental markets.

Great Summer Herring Fishing.

Practically the whole of the sailing boats engaged in the great summer herring fishing during the month of June and the greater part of July were from the Fifeshire coast, the district sailing boats being then engaged in the Shetland herring fishing. From the beginning to the close of the season there was every indication that herrings were in great abundance, and not so far from the land as in the preceding year. In general, the best results were obtained from 45 to 55 miles off, but heavy takes were got much farther off, and also within a mile or so of the land. Contrasted with the preceding year as from the 1st of July, there was a decrease in the catch of 4081 crans, but taking the catch as from the 1st of June, there was an increase of 28,841 crans in quantity and £84,997 in value.

Weather. Calms and light winds prevailed during July and the first two weeks in August, and the sailing boats were frequently becalmed at sea for several days in succession. The results obtained by steam drifters were also disappointing. Not until the weather became unsettled were the best results obtained, or the usual proportion of large full herrings caught. Towards the close of the season big shots of spent herrings were landed daily. On the 6th September an extraordinary quantity of these spent herrings was landed, for which there was an unprecedented demand, the average price for the day's catch being 22s. per cran, as compared with 3s. 1d. per cran for a similar quantity of the same kind of herrings landed on the last day of August 1904. The demand for these herrings was so good that practically the whole of the day's catch—some 18,000 barrels—were immediately purchased in a cured state, principally by Jewish buyers for the Russian markets, at prices remunerative to curers.

Heavy Catch and High Prices.

Curing. In the early part of the season the herrings were cured for immediate consumption, and nearly all were consigned unsold. In general, the returns were satisfactory. As the season advanced more salt was used to preserve the herrings for a longer period. Prices rose gradually as the season advanced until the second week in September, when there was a sudden fall of from 2s. to 4s. per barrel on the various brands, with the result that at the close of the year there were between 8000 and 9000 barrels on hand.

Line Fishing. Considering the small number of men employed in line fishing, the results were fairly satisfactory. At no time were haddocks plentiful, but during the early and closing months of the year codlings were in great abundance, and the best results were obtained as near the land as the lines could be set with safety.

Barrel-making. When not engaged in outdoor work in connection with the various herring fishings coopers were steadily employed at barrel-making, and all those inclined to work earned high wages. There was an increased demand for barrels with an iron hoop on each end and wooden hoops on the quarters. Many thousands of these were dispatched to other districts, principally Shetland, Lowestoft, and Yarmouth.

English Herring Fishing. An increased number of vessels engaged in the English herring fishing. The steamers met with remarkable success, but sailing boats were not so fortunate. The average earnings of the former were £956 and of the latter £190.

Harbour Improvements. The harbour improvements begun in September 1905 were pushed forward with gratifying success, and the north harbours were opened in time for the summer traffic. Operations were not so successful during the autumn of 1906, and the deepening of the south harbour will have to be delayed until the close of the 1907 herring fishing.

[Table.

TABLE showing the Number of Boats Employed in each week from the 1st June to the 15th September, 1906, and Particulars relating to their Catches.

Week ended	No. of Boats Fishing.		Average No. of Daily Arrivals.		Highest Shot.	Total Catch for Week.	Price per Cran.	Average Price per Cran.
	Steam.	Sail.	Steam.	Sail.				
					Crans.	*Crans.*		
9th June.	15	82	12	42	69	7,140	6/ to 30/	12s. 9d.
16th ,,	23	54	29	52	110	9,510	12/ to 36/6	16s. 9d.
23rd ,,	50	77	46	47	100	8,654	8/ to 25/6	16s. 6d.
30th ,,	54	94	47	85	102	19,304	12/ to 20/	16s. 10d.
7th July.	54	180	60	76	103	11,098	7/ to 27/	18s. 3½d.
14th ,,	54	198	30	80	100	6,474	10/ to 30/	23s. 8d.
21st ,,	56	206	38	82	140	13,972	5/ to 30/	23s. 0d.
28th ,,	58	246	38	79	131	15,493	13/ to 50/	23s. 7d.
4th Aug.	56	269	36	106	141	14,276	23/ to 45/	24s. 4½d.
11th ,,	40	285	18	56	103	2,486	18/ to 60/	31s. 6d.
18th ,,	24	310	16	136	123	18,572	15/ to 48/6	27s. 10d.
25th ,,	44	296	31	178	151	19,424	19/ to 36/	28s. 3d.
1st Sept.	51	354	27	129	92	7,880	13/ to 40/	28s. 2d.
8th ,,	47	261	25	91	160	22,730	17/ to 38/6	24s. 0d.
15th ,,	41	146	18	31	160	6,922	12/ to 33/	25s. 6d.

Note.—Average price for June, 16s. 6d. per cran; from 1st July to 15th September, 25s. Steamers averaged 24s.: sail boats averaged 22s. 5d. Average price for whole season, 22s. 10d. against 16s. 5d. in 1905, and 10s. 7d. for 1904.

Comparative Statement showing the Number of Boats Employed, Average Catch per Boat, and Average Price for Fresh and Cured Herrings.

Year.	Number of Vessels Fishing.	Average Catch perBoat.	Average Price of Fresh Herrings.	Average Price of the various kinds of Cured Herrings per Barrel.						
				La. Full.	Full.	Mat. Full.	Spent.	Mattie.	Un-branded	Kip-pered.
		Crans.	*Per Cran.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1902	320	440	17s. 6d.	33 0	30 0	29 0	17 6	21 0	24 0	33 0
1903	350	340	19s. 6d.	28 0	26 0	25 0	15 0	18 0	20 0	28 0
1904	340	453	10s. 7d.	24 6	23 0	20 0	12 0	15 0	15 6	24 0
1905	265	542	16s. 5d.	32 6	29 6	26 6	18 0	21 6	21 0	30 0
1906	247	745	22s. 10d.	37 0	36 6	31 0	25 6	28 0	27 0	35 0

Note.—The figures in this table for 1906 show number of boats, &c., from 1st June. From 1902 to 1905 from 1st July.

Comparative Statement showing the Working of Steam and Sail Vessels from Peterhead during the Great Summer Herring Fishing, 1906.

	Number of Vessels Employed.	Average Number of Voyages per Vessel.	Average Number of Voyages per Week.	Total Number of Voyages.	Average Catch per Voyage.	Average Catch for Season.
						Crans.
Steam . .	44	47	3·2	2,051	26	1,237
Sail . . .	203	29	2·	6,064	21	638
	247	–	–	8,115	–	–

William Jeffrey,
Fishery Officer.

Peterhead, *7th January* 1907.

Fraserburgh District.

General Remarks.

The most remarkable features in connection with the fisheries of the district during the past year have been the long period during which the herring fishing was carried on, and the change of opinion amongst fishermen in regard to the utility of steam vessels for net and line fishing. The quantity and value of fish landed show a considerable increase, almost wholly in herrings. Fishermen and fishworkers have had a prosperous year, while fishcurers have made little or no profit on the business, owing to the high prices which have prevailed for fresh herrings.

Means of Capture.

There is very little change in the quantity and value of fishing gear. A new steam drifter, six sail boats of the largest size, and about thirty small and medium-sized sail boats were added to the fleet. The sail boats replace about an equal number which have been broken up or sold to other districts and struck off the register.

The continued success of steam vessels has caused a change in the opinion of fishermen belonging to the district. The great majority have hitherto held aloof from steam vessels, being hopeful that some other means, motor or otherwise, might be found suitable as an auxiliary to sails, and so enable them to continue using their present boats, most of which are of the largest size. The success of steam vessels has now forced them to the conclusion that, although these are expensive to begin with, they can, if diligently wrought, produce much higher earnings than sail boats. In consequence of this change of opinion, three new steam drifters are at present being built in the district, several others are ordered, and a number of orders have been placed in other districts. No first-class sail boats are now being built. It is expected that there will be a fleet of about twenty steam drifters belonging to the district by the end of next year. Were it not for the fact that fishermen cannot now dispose of their sail boats except at a great sacrifice in price, a much larger number of fishermen would at once adopt steamers.

Summer Herring Fishing.

A few boats commenced herring fishing operations about the middle of April, and from that time to the end of May 4411 crans were landed. The herrings at this early date were remarkably good, consisting of young fat fish. These were mostly disposed of as fresh or kippered. In June

45,049 crans were landed, and curing for the Continental market became general. During July 61,705 crans were landed, and the quality continued to improve. In August 65,427 crans were landed. A long stretch of calm and sultry weather prevailed during the greater part of July and August, in consequence of which the catch was very much curtailed. Owing to this circumstance, and the shortage of the catch in Shetland, the price of fresh and cured herrings advanced considerably. The fishing was continued until the end of September, and 24,394 crans were landed during that month. A few years ago the fishing extended only over a period of from eight to ten weeks, while this year the fishing was carried on for a period of eighteen weeks. Remarkably fine weather prevailed during the whole season. On one night only were fishermen prevented from shooting their nets by stormy weather. Compared with the returns of the previous year, there is a considerable increase in the quantity and value of herrings landed.

Steam drifters were responsible for 18·54 per cent. of the catch, at an average price of 21s. 1d. per cran, whilst sail boats accounted for 81·46 per cent., with an average price of 21s. 11d. The average price for the whole catch was 21s. 9¼d. per cran, compared with 16s. 6¾d. last year. With regard to the lower average price shown by steam drifters, it has to be explained that they landed the larger portion of their catch early in the season, when the lowest prices prevailed. As a rule, steam drifters are the first to arrive, and generally obtain from 1s. to 2s. more per cran than sail boats.

Exportation.

Compared with the previous year's returns, an increase is shown in the exports of cured herrings to Helsingsfors, St. Petersburg, Port Baltic, Libau, Königsberg, Danzig, and Stettin, while Wyborg, Revel, and Hamburg show a decrease.

The Russian Government having decided to impose the ordinary duty on cured herrings entering that country by the port of Archangel, the import of cured herrings from this district came to a sudden end. In 1905 about twenty thousand barrels of cured herrings were sent to Archangel from this district.

A cargo of about 1200 barrels of early cured herrings was brought back from Stettin. These were reported by Continental agents to be in bad condition. On a close re-examination here, three-fourths were found to be in fairly good condition, and were re-shipped to other Continental ports, where they realised fair prices. It is generally believed that the condition in which these herrings were found on their re-examination here was principally due to the intense sun-heat to which they had been subjected on the Continent.

Stock on Hand.

At the end of the fishing season about 16,500 barrels of cured herrings remained on hand. These were all exported or disposed of by the end of the year.

Line Fishing.

Fully one hundred boats prosecuted the small-line fishing during seven months of the year, and about twenty large boats fished with great-lines during the months of February, March, and April. Line fishing was not so successful as last year, but during the period fishermen were so employed they made a fair livelihood.

Cooper Trade.

The manufacture of herring barrels continues to give steady employment and good wages to a large number of coopers. The number of barrels made in the district again exceeded all previous records.

Steam Trawlers.

The local Steam Trawling Company has had a fairly successful year at Aberdeen, and paid a dividend of 10 per cent. It is reported that the company intends to add a few steam drifters to its fleet.

Harbours.

Owing to the increase in the size of fishing boats, the harbours are not now available for several hours during low spring tides. An effort is being made to remedy this state of matters. A scheme for deepening the area inside the south breakwater is being discussed by the public. Plans and specifications have been obtained and a Provisional Order procured, and if the Harbour Commissioners can raise the money there is no doubt that this or some similar scheme will be carried out. Within the memory of the present generation fully £300,000 have been spent on the harbours of Fraserburgh. The instalments on the various loans have been duly paid.

Casualties.

There was, unfortunately, an increase both in the number of lives lost and also in the loss and damage to boats and gear.

George Cormack,
Fishery Officer.

Fraserburgh, *4th January* 1907.

Banff District.

General Remarks.

Taken as a whole, the year now under review was a prosperous one as far as fishermen are concerned. No class of the community is more prosperous or more deserving of success than the young fishermen of the present day. They carry on their work with energy and perseverance, following herring fishing along the coasts of England, Scotland, and Ireland throughout the year, with only a break of a few weeks at a time at home to overhaul their gear and refit their vessels. With the exception of the summer herring fishing, the various fisheries in the district yielded better results than in the previous year, but the general success was again largely achieved at the distant fishing centres. Curers had a fairly prosperous season, as far as the materials at their disposal went. The early herring fishing was unusually good, and, although the regular summer fishing was very poor, good prices were current for cured fish.

Means of Capture.

There was a slight reduction in the number of boats belonging to the district, which is chiefly attributable to several of the older class of herring boats having become obsolete. There was, however, a fair addition to steam drifters, with a likelihood of a still further increase.

Line Fishing.

Line fishing returns compare favourably with those of the previous year. Cod and haddocks, particularly the latter, show a considerable increase in quantity, but the value was kept down by the number of small haddocks caught. Fishermen are of opinion that the increase is partly due to the absence of trawlers in the firth.

Winter Herring Fishing.

The winter herring fishing was practically blank. The catch consisted of a shot of 40 crans landed by a steam drifter returning from Stornoway.

Early Herring Fishing.

The early herring fishing was very successful—a fortunate circumstance for those working the small boats employed at it, especially as later on there was a shortcoming in the regular herring fishing, on the success of which these men greatly depend.

Summer Herring Fishing.

The chief features of the summer herring fishing were the scarcity of herrings in the Moray Firth and the high prices ruling for green fish. The success of the early fishing raised expectations of good results, but these were never realised. The fishing opened fairly well early in July, with from 22 to 25 boats engaged. The greatest number engaged was 46. The best week's fishing was that of the week ending 4th August, when 1495 crans were landed. After that date little was added to the catch, and the season closed with a total catch of fully 1000 crans less than in 1905, which was one of the poorest on record.

English Herring Fishing. The English herring fishing is becoming increasingly important as an outlet for the energy of Scottish fishermen. Fourteen steam drifters and ninety-five sailers belonging to the district were engaged in it. The weather conditions frequently prevented the sail vessels from getting to sea, and consequently they did not do so well as last year. Their gross earnings ranged from £230 to £450. The steam drifters, under the same weather conditions, demonstrated their superiority over the others, being able to go to sea with comparatively little interruption. They all did well, their earnings, which ran from £750 to £1160, being very similar to those of the previous year.

Irish Herring Fishing. Three steam drifters and forty-two sail boats went to Ireland, or double the number that went in 1905. Their catches generally were small, but the exceptionally high prices obtained—50s. to 90s. per cran—made their earnings fairly good. The steamers grossed from £300 to £500, and sailers from £100 to £200, one or two of the latter reaching £300 to £400.

Crab Fishing. Crab fishing returns show a considerable increase, the quantity and value being nearly twice as great as in the previous year. This is accounted for by the fact that there was no loss of creels, as was the case last year at the most important part of the season.

Boatbuilding. Boatbuilders were fairly busy during the year, building four steam drifters and fifteen sailing craft. Their chief occupation will now be the construction of steam drifters, as the success of this type of vessel during the last two years has led to a number of orders being booked. Were it not for the difficulty of disposing of the sail boats the orders would be much more numerous.

Casualties. In the end of October a distressing accident occurred in connection with the English fishing. The boat "Norseman," belonging to Macduff, while making for the harbour at Lowestoft, was run down by a passing steamer and all her crew of eight men drowned. Five of these belonged to Macduff, three of them being brothers and one a brother-in-law, and much sympathy was felt for the aged parents, who lost all their sons at one sweep, and for the widows and orphans so suddenly bereaved. With the exception of this catastrophe, there was no loss of life in connection with the fisheries, and the damage to boats and gear was comparatively trifling.

JAMES FARQUHARSON,
MACDUFF, *5th January* 1907. *Fishery Officer.*

Buckie District.

General Remarks. The result of the fisheries prosecuted in this district during the year 1906 was moderately successful, showing an increase both in the quantity and value of fish landed when compared with the returns for the preceding year. The increase is mainly due to the success of the early herring fishing. The majority of the fishermen belonging to the district devote their attention principally to the herring fishing at other stations as the seasons come round, and to them the year has been one of exceptional prosperity, especially to those possessing steam drifters, a number of whom earned from £3000 to £3800 for their year's work. It is estimated that earnings amounting to fully £400,000 have been brought home to the district from the various herring fishings engaged in. The success of the year's operations is attributed more to the high prices obtained for the herrings than to the heavy individual catches of fish captured, and the season throughout has been purely a fishermen's one.

Means of Capture.

A remarkable feature of the year has been the considerable increase in the number of steam drifters. During the past four or five years about a hundred steam drifters, involving an expenditure of fully a quarter of a million sterling, have been added to the fleet. The number of sailing boats is gradually decreasing, and upwards of 50 zulu boats are at present being offered for sale. The leading theme of conversation among fishermen is the steamer *versus* the sailing boat question, and it is the general opinion that in a few years the steam fishing vessels will supersede the sailing craft, as they are better adapted for fishing, not only in calm but in rough weather, while in addition they provide greater comfort generally to fishermen. The wooden-built vessels are most favoured, as they are considered more buoyant at sea and better to live in than the iron-built vessels. Netting shows an increase in area, as steam drifters possess a larger quantity of nets than sailing boats. The extra hands employed on board these vessels are accountable for the slight increase in the number of fishermen.

Herring Fishing.

The winter herring fishing was of little account, the catch showing a decrease of 1132 crans when contrasted with that of 1905.

The early summer herring fishing started much earlier than usual, owing to the comparative failure of the Stornoway fishing and the early fishing at Shetland. In June the fishing was very successful, and the total catch amounted to 5574 crans more than that of 1905. The quality was fairly good, the herrings being matjies resembling those caught on the West Coast. The average price per cran was 15s., against 10s. in the preceding year.

The great summer herring fishing was carried on for a time by 30 sailing boats, but they were gradually attracted by the larger catches and higher prices obtained at Fraserburgh, Peterhead, and Shetland, so that by the end of July the catch entirely depended upon steam drifters coming home for the week-ends to coal. The season closed with a decrease of 1519 crans as compared with the catch for 1905. The herrings landed were of mixed quality, containing a large proportion of spent fish. The average price per cran was 18s., against 14s. 3d. in the preceding year.

Both the sailing boats and steam drifters had a most successful season at the East Coast and Shetland fishings. The amount of the gross earnings of the district boats during that period was estimated at about £230,000, and this sum will long be remembered as one of the most remarkable in the history of the Scottish herring fishing.

Cod and Ling Fishing.

The cod and ling fishing was not prosecuted to any great extent, and, although the catch of cod was greater than in 1905, that was due to larger quantities having been landed by the small and hand line boats.

Haddock Fishing.

The haddock fishing is the principal industry carried on in the district. In the early part of the year the fishing was attended with poor results, but during the summer and autumn months the catches were the best landed for many years. This improvement was attributed by fishermen to non-trawling by foreigners during that period. The year's catch shows an increase of 933 cwts. upon that of 1905.

Branding.

Owing to the fact that the herrings landed were unsuitable for the official crown brand, consisting as they did chiefly of fish with undeveloped milt or roe and sea-salted herrings, the brandings for the year were the poorest on record.

Exportation.

The bulk of the season's cure was shipped coastwise or sent by rail to Leith for the Continental markets, the fishcurers preferring to consign their herrings to Russian ports rather than sell them on the spot.

Irish Herring Fishing.

Owing to the non-success of the fishing in 1905, only 40 boats went to the north-west coast of Ireland herring fishing. Again very little success was attained, and had it not been for the extraordinarily high prices realised for the fish caught, the venture would not have cleared expenses.

English Herring Fishing.

In view of the high prices obtained for herrings throughout the summer herring fishing, the prospects for the English fishing looked very promising to fishermen, and a larger fleet than ever visited the English stations, namely, 101 steam drifters and 225 sailing boats. In so far as the steam drifters are concerned, the fishing proved a great financial success. The majority of them earned from £1000 to £1610. The sailing boats were not so fortunate, especially those fishing at Lowestoft, owing, in a great measure, to congested harbour accommodation, which prevented the boats for days together from getting to sea. The most successful boat had gross earnings of £820, while a good many did no more than clear the expenses of the voyage, so that the sailing boats' average earnings were only about £180.

Barrel-making.

Most of the coopers were steadily employed at barrel-making the whole year round. All the barrels and half-barrels were made with an iron hoop on head and bottom, this being the style of hooping most favoured by the trade. A small barrel factory was opened at Buckie in the spring.

Boatbuilding.

The building of steam drifters has been actively carried on at all the district stations, and in all 26 vessels were launched during the year, mostly for local fishermen. The value of these vessels was £67,000—a figure never reached in the days of sailing boatbuilding. This branch of the industry is fast developing, and another yard has been opened at Garmouth, making in all nine yards building drifters. All the builders are well supplied with orders for another year, and it is stated that 50 new vessels are ordered or being negotiated for with Scottish and English builders, most of them having to be ready for the early fishing in May.

Loss of Life and Fishing Gear.

Fortunately, the loss of life was not so great as in 1905; but the loss of netting, sustained chiefly at the Stornoway winter and the English fishings, was very considerable.

Barometers.

The two new barometers supplied by the Meteorological Council to Portessie and Portknockie, are highly appreciated by the fishermen, and this they have shown by fitting them up in a creditable manner.

James Donaldson,
Fishery Officer.

Buckie, *5th January* 1907.

Findhorn District.

General Remarks.

The most notable features of the fishing industry of the district during the year 1906 were the success of the steam drifters and the great demand which has arisen for that type of vessel.

Increase of Steam Drifters.

Each succeeding year shows the superiority of the steam drifter over the sailing craft. During the year under review the number of steam drifters owned in the district was increased from thirteen to nineteen. With the number that are in course of construction, and the orders that are booked with builders, there will be over twenty steam vessels added to the district fleet in the course of 1907.

Building of Steam Drifters.

There is every indication that the large sailing craft will in course of time be entirely supplanted by the steam vessel. As there have not been any sailing boats built for a year or two, and as none is likely to be required, builders are now devoting their attention to the construction of wooden steamers. Early in the year two firms secured orders for these vessels from local crews, and since then a third firm has entered the field. Three very satisfactory vessels have been completed, and three more are in course of construction, while orders are on hand for three or four others.

Wooden Vessels favoured.

Wooden vessels are at present favoured by most of the fishermen of the district, the reason being that they are considered more buoyant than iron boats in a sea-way, and therefore less liable to ship water. Less painting is required for the wooden craft.

Year's Earnings of Steam Drifters.

With a very successful summer herring fishing at Shetland and the East Coast, succeeded by an even more successful season on the English coast, the owners of steam drifters in this district had a particularly successful year. Their earnings ranged from £1890 to £3545, with an average of £2370. Four new vessels that were fitted out late in summer and early in autumn averaged £100 for each week they worked. In the month of November one vessel at Lowestoft earned £392 in one week alone.

Establishment of an Engineering Works and Construction of a Patent Slip.

To meet the requirements of the changed conditions, an engineering establishment has been erected at Lossiemouth for the making of engines for drifters and the executing of repairs. In connection with that establishment a patent slip has been constructed for the hauling of fishing vessels when undergoing cleaning and repairs.

Winter Herring Fishing.

Few sail boats were fitted out for the winter herring fishing. All the steam drifters, however, were at work, and operated mostly from Stornoway and Wick. In general, the season was not a very remunerative one, the weather conditions very frequently being unfavourable.

Early Summer Herring Fishing.

While the early summer herring fishing was being prosecuted, the whole of the crews of this district were distributed over the various centres on the North and West Coasts, and the north of Ireland. The venture at that season did not prove very remunerative to fishermen.

Herring Fishing in the District.

Herring fishing was carried on in the district during the months of June and July, the catch being about equal to the average of the last few years. After July had expired the crews that had been working in the district proceeded to the larger centres, where they operated for the remainder of the season.

Satisfactory Results of East Coast Season.

On the whole, the district crews experienced a very remunerative season while pursuing the herring fishing at the various East Coast centres. High prices were realised for the fish landed, and, therefore, individual earnings generally reached a high figure. Sailing boats, in many instances, secured from £500 to £700, while steamers had earnings of from £750 to £1200.

Small Herring and Sprat Fishing.

Every encouragement was given to fishermen to pursue the herring fishing regularly, as there were three curing firms at Inverness purchasing besides the regular buyers for the fresh markets. Two of the curers put up their purchases in bulk in barrels and shipped them off to Bergen. One adopted the clipping process in place of gutting, then packed and salted as in the ordinary process of curing. Good prices, which commonly varied from 14s. to 26s. per cran, were realised for the herrings landed. Sprats were not at all abundant during the season, nor were they of a superior quality. What were secured were generally disposed of at from 18s. to 27s. per cran. Most of the catch was purchased for a Swedish firm, who put up the fish in a specially-prepared pickle and exported them to Sweden.

Haddock Fishing.

A marked improvement in the haddock fishing took place all over the district during the latter half of the year. The cause to which this agree-able change was attributed was the exclusion of trawlers from the Moray Firth after July of the current year. From the time that trawlers ceased to operate in the Firth the catches of the line fishermen gradually improved, and by October and November such catches were being secured, when favourable weather prevailed, as had not been got for a considerable number of years.

Cod Fishing.

There was little cod fishing done in the Moray Firth by line fishermen as that species of fish was very scarce. Fishermen, however, are hopeful that the fishing may improve if trawling is prohibited in the Firth.

English Herring Fishing.

A fleet of one hundred and twenty-three sailing boats and nineteen steam drifters—the greatest that ever left this district—proceeded to the English coast to prosecute the herring fishing. A most successful season was experienced by the crews of the steam craft, the earnings of those who were at work for the whole season ranging from £1000 to £1440. Some crews, however, sustained heavy losses of netting. The weather conditions during three weeks of the season were very unfavourable for the sailing craft, and consequently to them the season was not generally a successful one. They had gross earnings of from £80 to £720. The high prices that were paid for fresh fish was the leading feature of the season, and to that the high earnings of drifters is to be attributed. It is estimated that the gross earnings of the nineteen steamers were £20,490, while one hundred and twenty-three sailers had £31,620.

Irish Herring Fishing.

Only a small number of boats from the district went to the Irish coast in order to engage in the herring fishing. They arrived in the early part of the season, when little was being done, and as they were discouraged by their indifferent success, they did not continue operations for any length of time. One crew that remained longer than the others ultimately met with fair success, earning £250.

Mackerel Fishing by District Crews at Milfordhaven.

Early in the year four Lossiemouth crews proceeded to Milfordhaven for the purpose of prosecuting the mackerel fishing, but unfortunately the venture was not a successful one. More satisfactory results were obtained in previous years.

Barrel-making.

An increased number of barrels was made in the district. A large portion of the quantity manufactured was shipped off to various stations in Shetland, while a considerable number was dispatched to the English centres.

Loss of Life.

In the course of the year two men lost their lives at sea by falling overboard, while two were drowned in harbours while boarding their boats at night.

Fishery Barometers.

There are two fishery barometers in the district, both of which are in good working condition, and continue to serve the purpose for which they were intended.

James Ritchie,
Fishery Officer.

Lossiemouth, *3rd January* 1907.

Cromarty District.

General Remarks.

The fishermen of the district were fairly prosperous in 1906. The local fisheries, conducted chiefly by means of small-lines, produced better results than in the preceding year. The value recorded for fish landed at the district creeks represents, however, only about one-third of the fishermen's total earnings.

More attention than hitherto was directed to herring fishing away from home, and in this connection the crews of first-class boats, and hired men on boats belonging to other districts, earned close on £24,000 at different parts of the Scottish, English, and Irish coasts. The majority of these men were absent from June to November. English, Irish, &c., Herring Fishings.

The highest earnings, ranging from £200 to £600 per crew, were made on the Aberdeenshire and English coasts.

A number of women from the different villages found profitable employment at these places as gutters and packers during the same period. Female Labour.

The only attempts at summer herring fishing, locally, were made by Portmahomack and Rockfield crews on the old spawning haunts of the herring off Tarbet Ness. These efforts proved ineffective, and the fishermen betook themselves to Fraserburgh early in July, where they had a successful season. Local Herring Fishing.

Very little change was effected in the means of capture. Avoch is the only place which seems to be advancing in this respect, but even there improvement is mainly in the size of the boats. Steam is used exclusively for haulage purposes. Means of Capture.

On the return of the Avoch men from the herring fishing at Fraserburgh and Peterhead over 20 crews fitted out their second-class boats and commenced fishing for sprats in the Inverness and Beauly Firths. At intervals, until the close of the year, good catches of sprats and small herrings were obtained. These met with a ready sale at Inverness, for curing purposes chiefly, and prices for sprats often exceeded 30s. per cran. Before the close of the season about 40 boats were at work. The produce was landed at Inverness, and the results of this fishery are recorded in the returns for Findhorn district. Sprat Fishing.

Haddocks were found more plentiful on the contiguous grounds during the closing months of the year than at any period in recent years. On several occasions crews in the section of the district from Cromarty northwards secured from 8 to 12 cwts. of good-sized haddocks at a shot. The fish were mostly disposed of fresh in the district between Inverness and the coast. A number of fishermen inclined to the belief that the improvement in the fishing was due to the exclusion of foreign trawlers from the Moray Firth, following on the decision of the High Court of Justiciary in the case of Mortensen *versus* Peters in July. Small-line Fishing.

Fishing for cod, ling, &c., by means of great-lines is now almost a defunct branch of the industry. The higher rate of remuneration derived from the early herring fishing on the West Coast and Shetland, and the difficulty of procuring herrings for bait, are chiefly responsible for the growing neglect. Great-line Fishing.

Large quantities of whelks were gathered, principally by the female portion of the communities. The work is very laborious, but yields a fair return when little else can be done. The whelks were dispatched chiefly to London in bags. Shell-fish Fishery. Whelks.

The small-line fishermen kept themselves supplied with mussels for bait from the beds in the different firths, but fewer mussels were taken away by stranger fishermen than in the preceding year. Mussels.

An enlargement of Avoch harbour was effected by extending the breakwater. This extension is proving a boon to the fishermen, and affords good shelter for the growing fleet of first-class sail boats. Harbour Improvement.

Alex. E. M'Kenzie,
Fishery Officer.

Cromarty, 5*th January* 1907.

Helmsdale District.

General Remarks.

The results of the fisheries of this district for the year 1906 show a slight improvement when compared with those obtained in the year 1905, which, however, were probably the poorest on record. For some years the number of the district fishermen going out to the various herring fishings as hired hands aboard steam and large sailing drifters has been increasing. In the year 1906 upwards of 170 men were thus employed, their earnings, in the majority of cases, being very satisfactory.

Means of Capture.

The fact that three large and well-equipped "zulu" boats were in 1906 added to the district fleet shows that the fishermen have now begun to move with the times. These boats were purchased second-hand by crews belonging to Embo, Golspie, and Dunbeath respectively, and cost from £300 to £400 each. Owing to unseaworthiness, 13 herring boats of the smaller size were taken off the list, and other 20 boats of the same class were not launched during the year.

Ramie for Drift Nets.

With a view to testing the suitability of ramie for the manufacture of herring drift nets, a Helmsdale boatowner had four nets specially made for him out of that material. These nets were used by the crew of one of his steam drifters at the early and late summer fishings. On returning home the fishermen reported that the nets were strong and their catching qualities excellent. They were also of opinion that they would be very durable. They stated, however, that the twine used in their manufacture had been spun much too fine, and in consequence the herrings got so securely meshed that it had been found extremely difficult to shake them out of the net. The boatowner was fairly well satisfied with the result of the experiment, and has placed an order with a net manufacturer for a full drift of ramie nets. These are to be made of heavier twine, and supplied in time to admit of their being used at the ensuing West Coast fishing.

Herring Fishing.

The summer herring fishing was prosecuted by a dozen boats from Helmsdale and Dunbeath. In the latter part of June and the first half of July these crews met with a little encouragement. Some good shots of herrings were secured on the inshore grounds, and the fishermen were in hopes that the Moray Firth fishing was going to revive. These hopes, however, were not realised. About the middle of July the fishing suddenly collapsed. Fishing operations were continued for a few weeks after that date, but no success was met with. In the month of September a small cargo of herrings in a seastick state was imported from North Shields by one of the district curers. These were filled up and branded at Helmsdale, which circumstance accounts for the number of barrels branded and exported exceeding the number of barrels returned for the district as cured gutted.

Plaice Fishing.

During the months of February and March the plaice fishing furnished the fishermen of Embo with remunerative employment.

Haddock Fishing.

In the closing months of the year haddocks were more plentiful on the fishing grounds off Embo, Golspie, Brora, and Dunbeath than they have been for many years. When weather permitted of fishing, the crews employed from these villages secured takes which ranged from 5 cwts. to 10 cwts. The fish, however, were very small, and on that account useless for sending to the southern markets. Most of them were therefore disposed of locally by the women. There has been practically no trawling on these grounds since February last, when, at the Dornoch Sheriff Court, the Fishery Acts and bye-laws of the Board were successfully applied to foreign trawlers fishing in the Moray Firth. In the opinion of all the district fishermen the presence of these young haddocks in such large quantities is due to that reason.

Crabs and lobsters were unusually scarce, and the fishing was less successful than it has been for years. Crab and Lobster Fishing.

At the close of the year the Meteorological Committee granted on loan a new fishery barometer to the fishing community of Dunbeath in lieu of the one lent to them more than 30 years ago, which had become defective. Fishery Barometer at Dunbeath.

Two small-line boats were wrecked during the year, one belonging to Golspie in January, and one to Helmsdale in December. In each case two fishermen lost their lives. The loss of fishing material and damage to fishing boats returned against Helmsdale refers chiefly to steam drifters. Casualties.

Alexander Wood,
Fishery Officer.

Helmsdale, *7th January* 1907.

Lybster District.

Compared with the previous two years, the results of the fishing industry for the year 1906 are fairly satisfactory. Both the quantity and value of fish landed were greater than in the preceding two years, while in addition the fishermen landed a larger quantity of herrings than formerly at the port of Wick. The fishermen of the district, however, move about very little from one station to another. They take no part in the West Coast or English herring fishing, and in fact confine themselves almost entirely to the grounds within the Moray Firth. General Remarks.

Each year shows a decrease in the number and tonnage of boats. During the year 1906 four were broken up and cancelled from the register, and there is no likelihood of their being replaced. Nets and lines are also on the decrease, and no effort is being made to keep up with the times with these or any other means of capture. The changes which are taking place year by year in the size of boats, and the improvement of fishing gear, seem to be ousting the crofter fishermen more and more from the field. Means of Capture.

Fewer boats than in any previous year were fitted out for the herring fishing. The number was 18, as against 26 in 1905, 13 of these adhering to the old order of things by working the old rig of nets and rigidly sticking to the inshore grounds off Lybster. From the appearance of herrings on these grounds fishermen were hopeful that the good old times were coming back again, but unfortunately it was proved that the shoal was of small dimensions. The other five crews took courage and cast in their lot with the Wick fleet and landed their catches at that port. The quantity landed direct at Lybster was slightly greater than in the previous year. Great Summer Herring Fishing.

There were four curers in readiness at Lybster with stations, women, and men in the event of a successful fishing being landed. The facilities afforded by the railway for moving men and women to and from Wick enabled them to keep these stations opened, otherwise, owing to the small quantity cured, they would have had to be closed. Curers.

Several boats fitted out for the winter herring fishing, and the early part of the season showed some signs of success. The catch at the close, although more than double that of the previous year, was a very poor one. Winter Herring Fishing.

A slight improvement is observed in the quantity of white fish landed when compared with the returns of the previous few years. A gradual improvement in the catches of haddocks and codlings was observable White-fish Fishing.

during the last two or three months of the year. This was attributed to the decision in the High Court of Justiciary in the case of Mortensen *versus* Peters, whereby foreign as well as British trawlers were excluded from the Firth. Fishermen are therefore hopeful that the depleted grounds will gradually again be replenished.

Barrels.

Barrel-making continues to give employment to all the coopers belonging to the district, the cheap storage and railway facilities enabling curers to keep their cooperages filled with the necessary number of hands.

Loss of Property and Fishing Gear.

In the early part of the winter herring fishing a large boat was totally wrecked in taking the harbour, and, owing to the dark night, the crew narrowly escaped losing ther lives. A large quantity of netting was lost on the same night.

WALTER DUFF,
Fishery Officer.

WICK, *4th January* 1907.

Wick District.

General Remarks.

The total quantity and value of fish landed in the year 1906 were slightly less than in the preceding year. This is accounted for by the comparative failure of the latter half of the great summer herring fishing season. The prosperity of the fishing industry, however, can hardly be gauged nowadays by the quantity and value of fish landed within the boundaries of the district. It has to be borne in mind that the majority of the most enterprising fishermen depend greatly upon the English herring fishing, in which they take an active part, and for the year under review their earnings have been greatly augmented by the success which attended this fishing. On the whole, therefore, the year can be said to have been a fairly prosperous one.

Means of Capture.

In consequence of the inclusion this year of "other than Scottish" steam fishing vessels in the means of capture, an increase in the number, tonnage, and value of fishing boats will be observed. There is, however, a decrease in the number of steam drifters belonging to the district, three having been transferred to other districts. One of them will soon be replaced by another which is in course of construction. A number of fishermen have, during the year, gone in more for large second-hand sailing boats which were for sale on the Banffshire coast. Some of these were bought at a cost of over £500. In this way the tonnage and value of the combined fleet of steam and sail boats, exclusive of "other than Scottish" vessels, are well maintained.

Ramie Nets.

An experiment was made during the autumn herring fishing with a few nets made of the ramie vegetable fibre. These nets are supposed to be much more durable than those manufactured of cotton, and have been proved to catch almost double the quantity of herrings. Although 15s. per net dearer than those made of cotton, a few more have been ordered, and it will be interesting to watch how they fare. It may be stated that ramie nets have long been used by the Chinese, and so durable are they that they are handed down from father to son.

Great Summer Herring Fishing.

In consequence of the failure of the West Coast herring fishing, the great summer herring fishing opened early, and for the first few weeks it was anticipated that in every respect the season was going to prove a record one. Herrings were found in abundance in the waters off the district inside and outside the Moray Firth, and in the month of June the unprecedented total of 40,000 crans was landed. The month of July also began with much promise, but the high hopes that were entertained were only partially fulfilled. Up to the end of that month, however, the total catch amounted to 83,000 crans, or about double the quantity landed in any previous year at such an early date. With the whole of August, the principal month of the season in previous years, to go, it was fully anticipated that this catch would be doubled. Such, however, was not the case, as, owing to a continuous spell of calm and sultry weather, the catch for the month of August was the poorest in the history of the herring fishing at the port of Wick. The result was that the season closed with a catch of 96,600 crans, or 10,000 crans short of the catch of 1905. The chief cause of this disappointing result was not the want of herrings on the various grounds, but, as already stated, the exceedingly calm weather which prevailed. The majority of the herrings, though caught early, were of extremely fine quality, and commanded prices which satisfied both fishermen and curers. The average price for June was 15s. per cran, for July 20s., for August 29s., and for the season 19s. 6d., as against 19s. in 1905.

Early Herring Fishing at Scrabster. Never since Scrabster became a recognised fishing port has there been such a failure of the herring fishing. Diligent search was made on the usual grounds from 20 to 40 miles and as far distant as 90 miles in a north and north-westerly direction, but without success. Consequently the season closed abruptly three or four weeks before the usual time, with the exceedingly small catch of 534 crans.

Winter Herring Fishing. The winter herring fishing began on the second week of January and continued, as usual, till about the end of March. On the average about 80 boats took part in the venture. The results were slightly better than those of the previous year, while the sums realised by the fishermen were considerably greater. The grounds worked upon were off Orkney and to the south of Wick.

Cod and Ling Fishing. It was feared that the fate of the cod and ling fishing was sealed, as for several years back it might be said that as an industry it had practically disappeared. So much has this been the case that fishermen had allowed themselves almost to drift out of great-lines, with the result that, on a revival of the fishing during the season of 1906, they had to fit themselves out anew with the necessary fishing gear.

Haddock Fishing. Haddocks have also been more plentiful, especially within the area of the Moray Firth, and the quantity landed shows an increase over the previous year.

Exportations. Exportations went on rapidly throughout the season, the trade, on the whole, in Germany and Russia having been good. As a reasonable profit was obtained during the process of cure, curers were selling almost all on the spot.

English Herring Fishing. Thirteen steam drifters and eighteen sailing boats belonging to the district took part in the English herring fishing. The success which attended the steam vessels exceeded by a long way even the success of the previous year, their average earnings being £955. The sailing boats did not, however, fare so well, their earnings only amounting, on an average, to £280. The weather conditions and the congestion of the river at Yarmouth frequently prevented them from getting to sea.

Barrel-making. The number of barrels made appears to be yearly on the increase. Coopers are not able to cope with the requirements of the trade without the aid af machinery, and to meet the demand machinery has been introduced by three firms in Wick.

Crab and Lobster Fisheries. The crab and lobster fishing is carried on chiefly by the crofter fishermen scattered on the western shores of Caithness and Sutherlandshire. This part of the coast is very dangerous and exposed to the full fury of wind and wave. Yet over 5000 creels were spread along the coast from Cape Wrath to Duncansbay, or one-third more than in the previous year

This increase in the means of capture is necessary to the upkeep of the quantity. The year's results show a slight decrease both in quantity and value from those of the preceding year.

Casualties.

There was only one life lost during the year, and, fortunately, the loss of property and fishing gear was comparatively small compared with the year 1905.

WALTER DUFF,
Fishery Officer.

WICK, *4th January* 1907.

Orkney District.

General Remarks.

Taken as a whole, the results of the various fisheries of the district exhibit no very marked change, either in volume or value, from those obtained in 1905. There was a decrease in the quantity of herrings landed, but an increase in value, the former being the result of the complete failure of the herring fishing at Stromness, and the latter of the enhanced prices received for herrings at Stronsay and Sanday. All the other fishings showed increases in both quantity and value, and the net results are a decrease of 17,628 cwts. and an increase of £7826 in quantity and value respectively.

Means of Capture.

There is no change of any importance to record in either the number, tonnage, and value of boats, the extent and value of gear, or the number of persons employed in the capture of fish during the year. In a district like this, where the fishermen combine crofting with fishing, new and improved methods are not so readily adopted as in places where the fishermen confine themselves exclusively to fishing and changes in boats and materials are less frequent.

Early Herring Fishing.

As already stated, the early herring fishing at Stromness was a complete failure. The fishermen, as formerly, adhered to the close time until the 11th May. On that date 140 boats commenced operations, but from the start there was no great appearance of fish on the ground, and the fleet gradually dwindled away till by the 15th June all the boats had gone. The few herrings landed were of good quality, and prices ruled at from 18s. to 32s. per cran—by no means a high figure when the short catch is taken into account.

An unusually early start was made at Stronsay. While at Stromness several of the fishermen tried the east side of the Orkneys with good success. Consequently they removed to Stronsay, and as several of the curers with their staff of workers were already on the ground, curing operations were in full swing by the end of June. The fishing was successfully prosecuted till the end of August. The number of boats engaged varied considerably during the season, but the average number was 90, and these had an average catch of 344 crans. In the early part of the season, and till well into July, the herrings were of a peculiar character, very fat and of fine flavour, much resembling west coast matjes, in imitation of which a considerable quantity were put up and shipped as matjes. Generally speaking, the quality was good throughout the season, and as there were six additional curers, the demand was keen and good prices were obtained—ranging from 16s. to 31s. per cran. As a result of the success of the fishing in June and July an earlier start will be made next season, and curers are already engaging gutters and packers with a view to commencing operations on the 12th June.

Extension of Whitehall Pier.

To meet the necessities of the growing fishing industry at Stronsay, an extension of 150 feet was made to the Whitehall pier last year. With the increased number of boats fishing, however, and consequent additional traffic during the progress of the herring fishing, the pier was as much congested last season as ever.

Line Fishing.

The line fishing is carried on principally by small and hand lines, and is engaged in to a greater or less extent all the year round. Two hundred boats were employed at the fishing throughout the year, and during the spring and summer months good success was obtained. The autumn was very stormy and boisterous, and the boats could only get to sea now and again, with the result that it was one of the poorest autumns the fishermen have experienced for a number of years. The year's work was fully up to the average of the past five and considerably in excess of the results in 1905.

Lobster Fishing.

The lobster fishing was successfully prosecuted during the year, the returns, compared with those of the preceding year, showing an increase of £300 in value. During the months of June and July two cargoes of lobsters were shipped abroad, one to Ostend and the other to Nieuport. This is a new departure in the lobster trade in this district, and it is to be hoped it may continue, as both the dealers and the fishermen would benefit from such a trade. Lobsters are plentiful during June and July, and a new market for them would be welcomed. The vessels used were well smacks, and the fish were thus kept alive during transit.

Bay of Firth Oyster Fishing.

Meantime, a good deal of interest is being manifested in the oyster beds in the Bay of Firth. Over 30 years ago a considerable industry in oysters was carried on at Firth, but, owing to the method of fishing adopted—dredging—the oysters were soon fished up and the beds destroyed, and very little was heard of the Firth oyster beds till quite lately, when a company was being formed with the object of cultivation and of trying again to resuscitate the industry. There seems little doubt that the industry could be revived by cultivation; as it is, oysters are again appearing, although the beds are not receiving any attention, a circumstance which would indicate that the bay is naturally adapted for oyster growth.

Casualties.

Two lobster fishermen, unfortunately, lost their lives in the prosecution of their calling, and two small boats were lost. The loss in gear was comparatively small.

TABLE showing particulars of the Great Summer Herring Fishing, 1906.

Week ending	Steam Drifters.			Sailing Boats.			Total.	
	No. of Vessels.	No. of Crans.	Value.	No. of Boats.	No. of Crans.	Value.	No. of Crans.	Value.
			£			£		£
July 7 .	11	286	272	72	1,853	1,766	2,139	2,038
,, 14 .	46	1,150	980	248	5,800	4,985	6,950	5,965
,, 21 .	17	190	184	120	1,282	1,240	1,472	1,424
,, 28 .	41	820	902	189	3,111	3,468	3,931	4,370
Aug. 4 .	31	664	954	200	2,960	3,559	3,624	4,513
,, 11 .	22	557	938	70	847	1,244	1,404	2,182
,, 18 .	18	556	734	213	3,315	4,010	3,871	4,744
,, 25 .	40	850	1,341	167	2,765	4,019	3,615	5,360
Sept. 1 .	26	488	694	84	1,020	1,166	1,508	1,860
,, 8 .	11	136	211	19	236	378	372	589
Total .	263	5,697	7,210	1,382	23,189	25,835	28,886	33,045

ROBERT MACKIE,
Fishery Officer.

KIRKWALL, *4th January* 1907.

Shetland District.

General Remarks.

Although the success attending the various branches of the fishing industry in Shetland was somewhat varied, the general results were very satisfactory, the total value of fish landed exceeding the figures for 1905 by £24,172. The quantity of herrings landed showed a decrease of 186,903 crans, but, owing to the higher prices that were current all the season, the value was greater by over £24,000.

Means of Capture.

There were no important changes in the means of capture during the year. After last year's experience, however, local fishermen are getting dissatisfied with the smaller-sized boats, a good many of which have therefore been struck off the register, and their places filled either by larger and better sail boats or by steam drifters, a few of which are now being purchased for local crews.

Herring Fishing.

The most noticeable feature in connection with the herring fishing is the growing tendency to centralisation at Lerwick and Baltasound, and, to a smaller extent, also at Scalloway and Hoswick. Not only have the boats and workers been increasing in number year by year at these stations, but they have been commencing earlier and continuing later than formerly. Indeed, apart from the fact that the north-western stations are still closed in July, there is now no line of demarcation such as used to exist between the early and late seasons in Shetland.

Winter Herring Fishing.

A few Moray Firth crews tried the winter herring fishing, but with indifferent success. Owing to unfavourable weather, both catch and value were less than last year's.

Scalloway and West Side.

Following upon the successful early fishing of 1905, there were great preparations at Scalloway for a commencement of the fishing in April, 32 stations, or exactly double the number working the previous season, being opened. This fishing, however, proved a failure, the total catch for April, May, and June amounting to only about one good day's fishing for the boats and curers employed. Better results were, however, obtained during the late fishing by the local crews. When the fishing opened at the other west-side stations no better success was met with. Along the whole coast from Walls to Cullivoe the June fishing was one of the poorest on record, entailing serious loss both on fishermen and curers.

Baltasound.

For the Baltasound fishing, although the number of boats did not quite come up to the preceding year's, preparations on shore were on a more extensive scale, four additional stations being opened. The season, however, did not open auspiciously, and many of the crews were so disheartened that they left as soon as their short engagements permitted. After this the fishing improved, and as high prices were paid for the herrings, fishermen who had waited on were generally well enough rewarded for their patience; but with a fleet reduced from 675 to 250 or 300 boats the shortcoming could not be made up, and the season closed with a deficiency of 107,395 crans, value £66,622, as compared with 1905.

Lerwick.

At Lerwick not only were there half-a-dozen large new curing stations, but many of the existing stations had been extended, and the staffs of workers and stocks of curing material were greater than ever before. The fishing here was steady all the season, though never so heavy as curers could have wished; or rather the fleet of boats was never large enough to supply the local demand for herrings. Fishermen accordingly received high prices for their fish all the season, as was also the case at Hoswick, Whalsay, &c., where the conditions were somewhat similar. Although most of the strangers left in the beginning of September, a number of local crews worked at the south-eastern stations for a month longer, and added very considerably to their season's earnings. For the whole season there was a deficiency in the catch of over 21,500 crans, but an increase in value of £107,000.

Fresh Herrings for Hamburg.

The firm that commenced sending roused herrings to Hamburg in 1905 continued these exports in 1906, and had two steamers running all the season.

Foreign Curing Vessels.

The Norwegian curers, as formerly, had their vessels at Lerwick, but apparently the prices were too high for them, as they bought fewer herrings than usual and left comparatively early in the season.

Prices, &c.

Owing to the exceptionally high prices, fortunate crews made record earnings. The most successful local crew had over £1200 for the Lerwick fishing; and at Hoswick, though the best boat's earnings did not exceed £875, the fishing was so equally distributed that the average for 24 boats reached the substantial sum of £580. The Burra Isle and Whalsay fishermen also had, as a rule, a very profitable season. On the other hand, a number of crews, especially those working in the smaller and older boats, or who had been engaged during the early season at the western stations, earned very little. There was no inshore fishing, the bulk of the herrings having been got from 20 to 70 miles off. Steam drifters, therefore, had a great advantage over sailing boats, and all of them, so far as could be learned, had a most profitable season. The boats belonging to one English firm averaged £1900, one boat having earned a gross sum of £2330 in 12 weeks.

Best Shots

The highest catch landed at Lerwick during the season was 180 crans, value £252, but a shot of 211 crans, valued at over £300, was landed at Skerries.

Cured Herrings.

Prices of cured herrings were firm and tended upwards as the season advanced until 38s. per barrel was current for Crown La Full. These high prices, however, apparently curtailed sales, and at the close of the fishing nearly 80,000 barrels were lying unshipped, of which over 26,000 barrels were still on hand at the end of the year, an unprecedented state of affairs in this district. With the failure of the west-side fishing, and the high prices paid for fresh herrings at the auction sales on the east side, the season cannot be regarded as a very satisfactory one from a curer's point of view.

Exports of Stock.

One result of the shortcoming of the fishing at most of the stations was the unusual spectacle of cargo after cargo of curing stock being removed to other stations at the close of the Shetland season.

Branding.

The total number of barrels branded fell short of the preceding year's total, not so much on account of the deficiency of the catch, which occurred mostly before the branding season commenced, but chiefly on account of the large proportion of what are known as matje herrings that were found among most of the shots all through the season, and which made the work of selecting the fulls for the brand very difficult.

English Herring Fishing.

Five Shetland boats went to the English fishing in autumn. Their earnings ranged from £145 to £335, and averaged £241.

Cod Fishing.

The great-line fishing was a comparative failure, owing chiefly to stormy weather and scarcity of bait. Only three local smacks fitted out for the Faroe and Iceland fishing, two of them being manned by Faroese crews. A number of Faroe vessels landed their catches in Shetland, and, with this addition, the quantity of cod, &c., cured in the district was greater than in 1905.

The haddock fishing showed a slight falling-off owing to stormy weather in the early part of the year. Fish were not scarce, but fishermen could not make so many trips to sea as formerly.

Barrel-making. Boatbuilding.

All the coopers were fully employed, both before and after the fishing season. Boatbuilders had also a fairly busy year.

Casualties.

Twelve fishermen lost their lives during the progress of the herring fishing, but none of them belonged to the district. There was very little loss of netting among the local fleet, but a great many haddock lines were lost during the spring months. A few boats were wrecked or damaged, mostly through bad weather.

R. Duthie,
Lerwick, *7th January* 1907. *Fishery Officer.*

Stornoway District.

General Remarks.

From the returns of all fish landed it will be observed that there is a shortage, as compared with the figures for 1905, of 60,074 cwts. The decrease in value, however, only amounts to £4050. This is accounted for by the price of herrings having been 4s. per cran higher than in 1905. The falling-off in the catch was entirely attributable to the light fishing during the early summer season, which turned out the poorest recorded since 1876. The winter catch was only 187 crans under the total of the preceding winter's fishing. Line fishing was fairly successful, considering the short period during the year the local craft were employed. Sixty local boats prosecuted the herring fishing at Shetland and the East Coast with good success; their average earnings were £258. Two thousand hired men brought home an average sum of £20; 2345 women workers returned to the island with an average of £8 from the East Coast and Shetland; 1306 of the foregoing went to England and earned an average of £4. Nine local boats were in England, and earned, on an average, £200; 350 hired men, who were also at Yarmouth and Lowestoft, brought home £5 each, on the average.

Mode of Capture.

There has been no change in the mode of capture of herrings or line or shell fish. There is a decrease, however, in the number of first-class boats, three vessels having been transferred to other ports and several having been cancelled as unseaworthy.

Winter Herring Fishing.

The winter herring fishing was opened on 2nd of January by a few boats. The fleet of fishing craft was composed, towards the third week of the season, of 130 steam vessels and 45 sailers, the latter being chiefly local craft. The principal fishing grounds during the month of January were in the Minch, from two to five miles off. Weather conditions being rather unfavourable, the result of the four weeks' fishing amounted to only 12,239 crans. In February storms and gales prevailed up to the 17th. During the week ended the 24th the best takes for the season were landed from off the Butt, 24 to 28 miles N.W. Takes of 100 crans by steam drifters were frequent, the highest being 171 crans. The following week, ending the 3rd March, also proved favourable, and shots of from 100 to 120 crans were brought in by steam vessels, the highest being 189 crans. One sail boat had 139 crans. The fishing practically closed on the 17th March, by which time nearly all the steam vessels had taken their departure. 25,621 barrels of herrings were cured for export, as compared with 17,861 in the previous winter. The average price per cran was 24s. 4d., against 15s. 7d. in 1905. Steam vessels earned an average of £360, against £215 the previous season. Sailing boats averaged £100, and the local craft £60. Two steamers were chartered by an Aberdeen firm to carry fresh herrings (iced) in boxes from Stornoway to Hamburg. One of these made only one trip. Weather conditions being very unfavourable during the period the vessels were under charter, the adventure did not prove a success.

Early Summer Herring Fishing.

A close time which had been enforced locally for a number of years against the landing of herrings from 10th April to 10th May had been disapproved by the Local Authority, and two steam drifters from the East Coast were engaged for a consideration to break up the arrangement. These vessels came to Stornoway towards the end of April and prosecuted the fishing unmolested. Although a number of steam and sailing vessels were in the harbour early in May, very few ventured to sea before the 10th of the month. The fishing fleet, at its largest, consisted of 48 steam vessels and 300 sailers. After a few trials, herrings being scarce, the majority of the former departed for other districts, several going to Ireland. Many of the sailers also took their departure for other ports. Steam vessels that continued to fish from Stornoway till about 15th June, when the season closed, earned an average of £100; sailers, £33, while two had £90 each. The average price per cran was 28s., as compared with 24s. 10d. the previous season.

Cod and Ling Fishing.

Some excellent takes of cod and ling were brought into Stornoway during the early part of the year by three steam liners hailing from Aberdeen. Prices ruled at 1s. 8d. per fish, for dispatch fresh to the southern markets. Local boats commenced operations in May and continued fishing till August with fair success as compared with previous seasons. Many of the crews cured their own catches and disposed of them, when dried, to local merchants. Prices for dried cod and ling ranged from £22 to £26 per ton.

Haddock Fishing.

Haddocks proved fairly abundant during the winter months. A number of small craft bordering on Broadbay were engaged to curers at

Stornoway, to which place the fish had to be carted from the different townships. The price per cwt. was 8s. for curing smoked for the southern markets. There were also fair takes obtained in East Lochroag.

Lobster Fishing.

There was a slight falling-off in the number of lobsters landed as compared with the figures for 1905. This is accounted for by the fact that fewer boats were employed during the winter and spring months, weather conditions having been very unfavourable for fishing. At South Harris a number of small craft follow the lobster fishing almost continuously during the year.

ALEX. SUTHERLAND,
Fishery Officer.

STORNOWAY, 10*th January* 1907.

Barra District.

General Remarks.

The most noteworthy feature in connection with the district fisheries for the year under review was the remarkable success which attended the prosecution of herring fishing, a circumstance which accounted for the gratifying increase in the aggregate returns of fish landed, which are the highest recorded for the district since 1870. Compared with the figures for 1905, which was considered a fairly successful year, the returns of white fish reveal the substantial increase in quantity and value of 72,604 cwts. and £22,095 respectively. Of the total quantity landed herrings contributed fully 93 per cent., the quantity landed by lines being comparatively insignificant. The produce of the shell fisheries was considerably under that of the previous year, and the value shows a decrease of £993.

Means of Capture.

As a result of the success of the local crews at herring fishing, a considerable addition was made to the class of boats ranging from 35 to 40 feet keel. Twelve second-hand boats purchased from east coast residenters at prices ranging from £50 to £120 were added to the registry, while negotiations are proceeding for the acquirement of a few others, including two new boats of a similar size for Eriskay crews.

Early Summer Herring Fishing.

The early summer herring fishing commenced at Castlebay in the beginning of May, and as the season advanced the fleet rapidly increased until in the beginning of June it numbered 140 steam drifters and 300 sailing boats. Herrings appeared to be abundant in the Minch waters during May, particularly on the Coll, Canna, and Tiree grounds, with the result that the landings for May form a record for the port. Although operations were vigorously prosecuted on the Atlantic grounds during the latter part of the season, the results were not encouraging, and early in June the fleet dispersed for the Shetland and East Coast fishings.

The quality of the Minch herrings was exceptionally good, but as curers were unprepared for such a heavy landing in May, prices were considerably lower than in previous years, the average price per cran for the season being £1 13s. 5d., against £2 11s. 6d. for the previous season, so that, although the catch was 15,395 crans above that of 1905, the gross value only showed an increase of £11,737. The most successful steam drifter and sailing boat had earnings of £480 and £360 respectively; but generally the aggregate value was fairly well distributed among both classes of vessels. Sixty boats prosecuted operations from Loch Boisdale during May and June with exceptionally good results, the season's catch amounting to 4838 crans, against 895 for the previous year. The average price per cran realised was 33s. 4d., against 36s. 2d.

Summer Herring Fishing.

The Minch grounds continued productive from July to September, and as a good demand prevailed for herrings the local crews and a few crews from neighbouring districts who prosecuted operations had substantial earnings, landing for the season at Castlebay and Loch Boisdale 5169 crans, valued at £6133, against 3600 crans, valued at £3180, for the corresponding period of the previous year.

Autumn Herring Fishing.

During the latter part of the year good takes of herring, which were disposed of principally at Loch Boisdale and Loch Skipport, were got in the South Uist lochs. The total landing amounted to 3948 crans, valued at £4894, against 4090 crans, valued at £3668, for the corresponding season of 1905.

Mackerel Fishing.

Although mackerel appeared to be abundant during July and August, this branch of the fishing was not prosecuted with any vigour, owing to the lack of buyers and the low prices prevailing. Compared with the results of the previous season, the catch showed an increase of 419 cwts., but a decrease in value of £283. 650 barrels were cured for export to the United States, where they realised on an average ten dollars per barrel, while a similar quantity was cured by the fishermen for local consumption.

Line Fishing.

Owing to the success of the herring fishing, line fishing received less attention and the quantity landed shows a decrease of 2019 cwts. compared with the return for 1905. The few crews who prosecuted great-line fishing during the spring months met with poor success, and operations were discontinued early in April.

Shell-fish Fisheries.

Lobster fishing was not so actively prosecuted as during the previous year, particularly at Barra and Loch Boisdale, and the value shows a decrease of £517. A slight increase is shown in the quantity of whelks dispatched from the northern islands; but the output from the Barra cockle beds was little more than a third of the quantity dispatched during the previous year. Although considerably fewer persons were at work during 1906, results points to the conclusion of over-fishing during the previour year.

Curing and Exportation.

With the exception of a small portion of the winter and autumn catch, all the herrings landed were, as usual, cured gutted. The early summer cure was sent to Russia and Germany in about equal proportions, the latter country receiving practically all the summer cure, while the autumn cure was largely disposed of in the home markets. Generally, prices for cured herrings were fairly satisfactory, and curers fared better than for several years past.

Casualties.

In October a Berneray fishing boat on passage from Lochmaddy was swamped and the four occupants—three fishermen and a crofter—were, unfortunately, drowned.

Improvements at Castlebay.

Early in May an increased water supply, costing over £1000, was introduced into Castlebay, whereby all the curing stations around the loch were provided with a plentiful supply. Another improvement which was also greatly appreciated by the trade was the erection of a new fish mart, which was opened about the same time.

[Table.

Statement showing particulars of the Early Summer Herring Fishing and Prices obtained for Fresh and Cured Herrings in Barra District during 1906.

Week ended	Boats Engaged.		Highest Individual Catch.	Total Weekly Catch.	Prices for Fresh Herrings.	Average Price per Cran for Week.	Aver. Prices for Cured Herrings.		Quality.
	Steam	Sail.					Selected.	Med.	
			Crans.	*Crans.*	*Per Cran.*	£ s. d.	*Per Barrel*	*Per Barrel*	
5th May	5	68	59	885	16s. to 24s. 6d.	0 19 7	45s.	23s.	Inferior.
12th ,,	14	140	56	1,582	25s. to 38s.	1 8 6	48s.	28s.	Fair.
19th ,,	20	260	89	6,708	5s. to 38s. 6d.	0 16 1	50s.	30s.	Do.
26th ,,	70	283	90	7,856	14s. to 68s.	1 14 0	55s.	33s.	Good & mixed.
2nd June	136	376	71	8,579	15s. to 54s. 6d.	1 16 0	58s.	34s.	Do.
9th ,,	140	349	76	4,971	25s. to 72s.	2 6 0	60s.	35s.	Do.
16th ,,	120	265	49	2,587	21s. to 80s.	2 3 2	60s.	35s.	Do.
23rd ,	15	95	31	1,521	28s. to 56s.	1 16 6	58s.	35s.	Fair
30th ,,	11	75	29	811	20s. to 41s.	1 10 1	52s.	33s.	Do.

WILLIAM SINCLAIR,
Fishery Officer.

CASTLEBAY, 5*th January* 1907.

Loch Broom District.

General Remarks. The results of the year's working can only be classed as slightly above the average. Following upon the most successful year in the history of the district, the results were especially disappointing. The value of all fish landed amounted to £13,554, as against £41,699 last year.

Means of Capture. There was a considerable reduction in the number of third-class, and an increase in the number of second-class, boats, while one first-class craft was replaced by a more modern vessel. Nets and lines remain almost stationary.

Herring Fishing. Herring fishing operations commenced at Loch Clash on 10th May, and were continued until well into June; at Badachro the fishing was prosecuted from June to December, and in Loch Ewe during the last fortnight of December. The Loch Clash fishing was the poorest for 12 years, while at Badachro operations were attended with results very similar to those of the last three years. At Loch Ewe a shoal of fish appeared about 15th December, but remained only a fortnight. The Ullapool fishing, which was so successful in the two preceding years, was an entire failure this year. For the small quantity got at the various places mentioned above from 18s. up to 29s. per cran was realised.

Line Fishing. Line fishing was carried on with more or less success all over the district. At all parts, except Ullapool and Badachro, fishermen consumed their catches themselves. At Ullapool haddock fishing was carried on from December to April, the catches being regularly shipped per Congested Districts Board steamer. The results of the cod fishing at Gairloch were very satisfactory, especially as regards the prices paid by buyers to fishermen. Compared with those of former years, prices have greatly increased. Formerly, cod sold at 9d. each, ling 9d., saithe 2½d., roker or small skate 3d, and conger 9d.; while this year cod realised 1s. 6d., ling 1s. 10d., saithe 10d, roker 1s., conger 1s. 6d. The increase in value is due solely to the steamer service put on by the Congested Districts Board between parts of the district and Kyle of Lochalsh. Nine buyers of fresh fish operated, instead of three as in 1905. Auction sales were also commenced, and the old system of engagements entirely abandoned. Fishermen at Gairloch highly appreciate the steamer service, and expressions of gratitude to the Congested Districts Board are not wanting.

Fish Exported.

With the exception of a small cargo of herrings exported to Norway no fish were exported.

Shell-fish Fisheries.

Compared with the results for 1905, the catch and value of lobsters and crabs show a decrease, due no doubt to the extremely stormy weather prevailing during the best lobster fishing months.

Although the waters adjacent to this district are simply teeming with good marketable crabs, and the assistance of the Congested Districts Board has been offered to the inhabitants in the shape of sample crab creels and a regular steamer service, they will not be induced to prosecute crab fishing as East Coast fishermen do. The men maintain that it is not profitable, basing their argument upon the poor results which have attended the sending to market of crabs taken in lobster creels. These crabs are, however, taken during the very worst crab-fishing months, both as regards the condition of the fish and the demand prevailing for them in the southern markets. Besides, lobster creels are set quite near the shore, where only empty and immature crabs are caught. Whelk gathering gave employment to a considerable number of people during the spring months.

The barometers at Ullapool and Badachro are in good working order.

Alex. M'Kenzie.

Fishery Office,
Ullapool, 1*st February* 1907.

Lochcarron and Skye District.

General Remarks.

The principal features of the district fisheries were the failure of the summer and the autumn herring fishings and the further development of the mackerel fishing. The returns of the other branches of the industry are about the average and show little variation from those of the preceding year.

Means of Capture.

The number and tonnage of boats and the area of netting again exhibit a considerable decrease. This falling-off is entirely due to the failure of the herring fishing in the Skye lochs during the past few years. A number of the fishermen unable to obtain a livelihood at home emigrated to the colonies, others went away as sailors, while others went to our large cities and found employment there. Their boats were left beached, with the result that they became unseaworthy. Within the past five years there has been a decrease of about 100 boats.

Summer Herring Fishing.

The summer herring fishing was commenced early in July by a fleet of about 80 boats. The fishermen persevered for about a month on the usual fishing grounds, but as their efforts were attended with little or no success, and as there were no indications of herrings being on the grounds, they ceased operations and a number of crews beached their boats for a season. The results of the fishing are the poorest on record.

Mackerel Fishing.

On the other hand, the mackerel fishing, which commenced about the middle of August and continued until nearly the end of October, was attended with better results than in any year since this fishing first commenced in the district.

The fleet which participated in the fishing numbered 52. Of these, 24 boats were fully equipped with mackerel nets, the others being equipped partly with herring and partly with mackerel nets.

The most prolific fishing grounds were between the islands of Croulin and Raasay, and off the coast of Applecross, and fish were fairly plentiful in these waters throughout the season.

At the beginning of the season the quality was rather inferior, and the average price realised during August only amounted to 10s. per cran. As the season advanced, however, the quality steadily improved, and prices rose accordingly. The quality during November was excellent, and the fish realised an average price of 67s. 6d. per cran.

The fish were landed principally at Portree and Kyle-of-Lochalsh, where they were sold by auction, and, with the exception of 85 barrels which were cured for America, consigned to the southern markets in a fresh state.

The season's results show an improvement over the figures of 1905 to the extent of 4985 cwts. in the quantity, and £2165 in value. Had the whole fleet been fully equipped with suitable nets there is no doubt that the results would have been much better.

Autumn Herring Fishing.

The autumn herring fishing was a complete failure. The results are certainly the poorest on record, and the oldest fishermen in the district do not remember having experienced such a barren year. The total catch for the last three months of the year only amounted to 126 crans.

Line Fishing.

As a rule, this fishing is pretty much neglected in this district, but, owing to the failure of the herring fishing throughout the year, it received a little more attention than usual, and the results are better than those of the past few years.

Shell Fisheries.

Of the shell-fish fishings, that for lobsters is the most important. It is prosecuted throughout the year by fishermen belonging to the west of Skye and those residing in the vicinity of Portree, and, to a greater or less extent, from nearly all the creeks in the district. The results for the year are very satisfactory, being well above the average.

On the other hand, whelk-gathering shows a considerable falling-off.

Casualties.

During the year three lobster fishermen belonging to Fernamore lost their lives owing to the capsizing of their boat in Loch Torridon.

A. J. MUNRO,
Fishery Officer.

BROADFORD, SKYE, *January* 1907.

Fort-William District.

General Remarks.

The principal features revealed by a comparison of the year's results with those of 1905 are the recurring failure of the herring fishing in this district and the continued prosperity of the great-line fishing at Mallaig. Total results show a decrease of 5699 cwts., while herrings are responsible for 4566 cwts. of this deficit.

Means of Capture.

There is no material change in the figures relating to means of capture. Nets for the taking of cod are coming more into favour.

Herring Fishing.

As already indicated, the failure of the herring fishing was complete. During the latter months of the year—usually the recognised time for this fishing—no herrings were landed at Mallaig, a very exceptional occurrence since railway communication was established. Four district crews proceeded to Loch Boisdale and experienced a fair share of success. No herrings are recorded as having been taken in Loch Nevis during the year. At Fort-William the results are much below those of the previous year. Only a very few crans were landed at Oban. The landings at Tobermory were chiefly made by boats working at Castlebay during the summer fishing. Lochbuie once more proved very unproductive. During the last two months several crews operated there when weather permitted, but with very discouraging results. In common with other creeks, Canna felt the want of herrings. In contrast with that of last year, the fishing at Loch Boisdale kept the local boats, which usually work the grounds around Canna, at home.

Herrings Cured.

The very light catch naturally limited curing operations, which were confined almost entirely to Canna.

Curing at Sea.

As illustrating the extreme scarcity of herring in local waters, it may be stated that one vessel was cleared from this district, but secured no herrings for curing.

Great-line Fishing at Mallaig.

As usual, the great-line fishing at Mallaig opened in January, and by the first days of February was in full swing. Although the fleet of boats working was somewhat less than in the previous year, the results were fully maintained, and, notwithstanding some prolonged interruptions by stormy weather, some capital earnings were made. Three steamers were steadily engaged during the season, manned by Rosehearty crews, while others made short visits to the port. Two of these vessels were most successful in point of earnings. One of the sailing craft did remarkably well, and easily took third place. Some exceptional shots were landed. The following are a few examples of the value of individual shots:—£60, £50, £43, £38, and £34. The highest figure is credited to a steamer, while a sailing boat claims the second figure. As a matter of fact, the sailing boat landed more fish than the steamer did, the lower value being due to the shorter prices ruling at the following day's sale. The approximate earnings of the three steamers were £482, £425, and £234, while the best-fished sailing boat earned £363. Prices were well maintained during the season, except on one or two occasions when landings were heavy at the end of the week. On several days the extended fish-wharf was quite inadequate to accommodate the landings.

Oban.

The fishing was also fairly successful at Oban, where the local craft were augmented by three East Coast vessels.

Tobermory.

While the landings at Tobermory were slightly in excess of the previous year's, this creek is now neglected by strangers, unless they are driven there by stress of weather.

Tiree.

Great-line fishing from Tiree has now almost become a thing of the past. During the summer months, however, a fair quantity of haddocks was taken. These fish seem to have been fairly plentiful and close inshore—a very unusual thing for some years back.

Cod-net Fishing at Oban.

The success of cod-net fishing and its feature of abolishing the expense of bait attracted some more attention during the year under review. One of the East Coast crews worked nets in conjunction with lines, and did fairly well, while three local crews worked with small fleets of nets.

Shell-fish Fisheries.

Shell-fish fishing was followed with the usual energy during the summer months. Unfortunately, the total value shows a decline of £216. This shortcoming is confined to a few creeks, Tobermory being responsible for £196.

Trawlers.

Landings from trawlers were confined to three months, and consisted of four small shots.

Improvement at Mallaig.

The lighting up of Mallaig pier and harbour, mentioned in last year's report, has certainly proved a great boon to the trade, a large proportion of whose work is done at night. When the fishing is in progress the lights are kept burning all night, so that work can be carried on at all times.

Barometer.

The barometer is in good order, and it is expected that daily records of the readings will be made during the coming year.

JOHN GLEN,
Fishery Officer.

OBAN, 8*th January* 1907.

Campbeltown District.

General Remarks.

The results of the fisheries of the district, taken as a whole, compare unfavourably with those of the preceding year and of a considerable number of years past. The collapse of the herring fishing in Kilbrennan Sound towards the end of July, and its continued non-success right on to the close of the year, accounts largely for the decrease. Great-line fishing was more than usually successful at Campbeltown, and at other creeks fair results were obtained, while the returns of other varieties of fish landed were equal to the previous year's, and, in some instances, showed slight increases.

Means of Capture.

The returns for the year show a decrease of seven in the number of boats belonging to the district, but a slight increase in value, the result of the boats cancelled being of little value compared with those added to the fleet. With the exception of a tendency to increase the area of drift-netting at Campbeltown, the gear used in the capture of fish shows little change.

Herring Fishing.

The herring fishing throughout the year was disappointing, and, although for some years past it has been prosecuted almost without an interval, it may be said to have terminated during 1906 about the latter end of July. During the months of August, September, November, and December practically the whole fleet conducted operations on the Ayrshire coast. Fortunately, the majority of the crews were fairly successful, and during December several crews earned large sums at Ayr and Stranraer. From January to March a fleet of from 60 to 80 vessels were employed in Kilbrennan Sound, but during that period the catch shows a falling-off to the extent of 1997 crans in quantity and £1883 in value as compared with the returns of the corresponding months in 1905. July and August also show large decreases, although the discrepancy in value is not so apparent as in the quantity landed. Prices were considerably higher throughout the year, the average for the first three months being 28s. 9d. per cran, as compared with 24s. 4d. per cran in the previous year, and the average price from January to December was almost 50 per cent. higher than in 1905. The total deficiency in the catch amounts to 9090 crans and £5111 in quantity and value respectively. The quality of the winter herrings was excellent up to the middle of February, after which month they became spent, but during May and June good medium-sized fish were obtained, while in July they were again in excellent condition. The usual fishing grounds, which extend from Skipness to Kildalloig Bay and on the west and south-west of Arran, were fished at intervals, but the shoals which in former years were so prolific were not to be found on either side of Kilbrennan Sound. As many as fifty crews, a much larger number than usual, engaged in drift-net fishing during June and July, and the high prices obtaining, along with the regularity of the fishing, made it fairly remunerative, although the catches rarely exceeded a daily average of from 3 crans to 4 crans per crew.

Great-line fishing was prosecuted with satisfactory results at Gigha and Portnahaven, both these stations showing slight increases over the previous year's catch. The cod fishing at Campbeltown was the most successful experienced for many years, a fact which is attributed largely to the absence of steam trawlers, which were much less in evidence than usual on the fishing grounds where operations are carried on. The increase at Campbeltown over the figures for 1905 amounts to 1414 cwts. in quantity and £848 in value, and the total increase for the district is 1984 cwts. and £997 in quantity and value respectively. Cod nets were used at Campbeltown for the first time with so much success that this mode of capture is likely to become more popular. The want of bait for great-lines sometimes means considerable loss of time, while the nets can be worked independently of bait, and there is obviously much less labour involved. Cod and Saithe Fishing.

About the usual number of crews were engaged at small-line fishing, and the returns for the year show better results than was the case in 1905. With the exception of small consignments which were sent to Glasgow in the spring, the fish were all sold locally. The average price of haddocks for the year was 17s. 6d. per cwt., and of whitings 20s. 3d. per cwt. Haddocks and Whitings.

The absence of the herring fleet materially affected the catch of flat fish, which shows a decrease of 294 cwts. and £317 in quantity and value respectively as compared with that of the previous year. Flounder fishing was almost entirely neglected during the last two months of the year. Flounder Fishing.

The catch of lobsters shows no appreciable change from that of the previous year, and the total value of shell-fish is similar to that of 1905. Shell-fish.

The greater part of the herrings were, as usual, bought at sea and conveyed direct to market. Fresh Fish.

Although the district returns show a decrease, financially the fishermen were in a much better position than in 1905. The successful fishings on the Ayrshire coast contributed largely to this satisfactory result. Earnings of Fishermen.

Stormy weather seriously handicapped the crews engaged at the Irish herring fishing. Herrings were plentiful on the coast, but for weeks in succession operations were suspended. All the crews from the district, however, cleared expenses, and several made good earnings. Irish Herring Fishing.

Very few herrings were cured during the year, and the only exportations consisted of saithe sent from Portnahaven to Ireland. Cod, ling, and saith, were cured at Gigha and Portnahaven. Curing and Exportation.

The local boatbuilders were fairly well employed, and prospects are brighter than they were at the close of 1905. Boatbuilding.

The loss of fishing material was of very little account, and, fortunately, no casualty falls to be recorded. Casualties.

Munro Johnston,
Fishery Officer.

Campbeltown, *7th January* 1907.

Inveraray District.

For the third year in succession the results of the district fisheries have proved very disappointing to all concerned. When compared with the figures for 1905, the aggregate catch shows an increase of 2928 cwts., but, chiefly owing to the low prices paid for herrings, the monetary returns reveal a decrease of £1382. The total value, if not the lowest on record, is certainly the lowest for many years. General Remarks.

Means of Capture.

Owing to the continued depression in the fishing industry, a number of fishermen, belonging chiefly to Upper Loch Fyne creeks, were obliged to seek other employment, and this entirely accounts for the decrease recorded in the area of both drift and seine netting. The number of small-lines employed also shows a decrease, while a greater number of great-lines and cod-nets were in use. Two new boats were added to the district fleet, but this was more than counterbalanced by the cancellation of ten others from the register. The majority of the boats struck off the register were sold to various West Coast stations.

Herring Fishing.

On the results of the herring fishing the majority of the fishermen depend, so that the failure of the past season, following upon that of the one immediately preceding it, must be keenly felt in the district.

The season commenced in the early part of May, the fleet engaged consisting of 160 boats, compared with 180 in 1905. From the opening day it was quite apparent that few herrings were in the loch, and throughout the whole season only small shoals were met with.

In the upper reaches the total catch amounted to only 250 crans, but, if the quantity was small, the quality was quite equal to that of former years, and prices ranged from 40s. to 97s. 6d. per cran. The majority of the landings from Lower Loch Fyne were secured in the vicinity of Ardlamont, while fully 1000 crans were caught outside the boundaries of the district. These fish were generally of poor quality, and the price per cran varied from 5s. to 30s. Up till the middle of August the majority of the crews had not earned sufficient to meet expenses, and, in some cases, the earnings per man were less than £1.

Fortunately, about this time herrings appeared on the east side of Arran, and practically the whole fleet left for that quarter. Thereafter, except during a fortnight in October, operations were carried on in various parts of the Clyde—principally Greenock and Ballantrae districts—until the close of the year. The total catch for the season amounted to 5258 crans, and the value £5907, compared with 4672 crans and £7525 respectively for the previous year. The average price for the respective years was 22s. 6d. and 32s. 3d. per cran.

Curing.

Curing operations were, as usual, carried on at Tarbert and Ardrishaig, the number of barrels of herrings treated in this manner being 2323, compared with 304 in 1905. About one-fourth of the quantity cured was brought in a fresh state by carrying steamers from other districts.

All were done up for the home markets, where the demand, especially in the Western Highlands, was very keen. Prices varied from 22s. to 30s. per barrel, and at these figures local curers should have had a fair margin of profit.

Mackerel Fishing.

Mackerel were very plentiful in Loch Fyne during the months of July, August, and September, but as the fish were of poor quality and there was little demand for them, no special attention was given to this fishing. On several occasions large quantities, for which no buyers could be found, had to be put back into the sea, and at least 20 tons must have been disposed of in this way. Prices ranged from 1s. to 10s. per cwt., the latter price being exceptional.

The whole catch, which was taken with ordinary seine and drift nets, was dispatched to Glasgow in a fresh state.

Line and Cod-net Fishing.

Owing to a number of fishermen having found employment during the winter months in various shipbuilding yards on the Clyde, small-line fishing—never of much importance in this district—was almost entirely neglected, while the results with great-lines were similar to those of the previous year. Fair earnings were obtained at cod-net fishing during the months of March and April, but only a few crews adopted this method of capture.

Shell-fish Fisheries.

Although lobster fishing was considerably interrupted in the early part of the season by stormy weather, the number of fish landed was practically the same as in the preceding year. At Luing, the principal creek, there was a slight decrease, but this was fully made up by increases at Crinan and Loch Kylesport, where the catching power was greater than in 1905.

There was no material difference in the output of oysters, a decrease in the number taken from West Loch Tarbert beds being made up by an increase from Loch Sween.

Boatbuilding.

The construction of four boats at Ardrishaig kept the builders well employed there ; but, unfortunately, the same cannot be said of Tarbert, where the trade is at present in a very depressed state. Two of the boats launched were the largest ever built in the district, both being for Campbeltown owners. The outlook for 1907 is not encouraging.

Casualties.

Fortunately, no lives were lost in connection with the district fisheries, and the damage to boats and gear, although greater than in the preceding year, was, considering the capital involved, insignificant.

ROBERT SPINK,
Fishery Officer.

TARBERT, *5th January* 1907.

Rothesay District.

General Remarks.

The principal feature of the fisheries of this district during the year 1906 was the fair measure of success which attended the prosecution of the herring fishing. The season's catch amounted to 13,709 crans, valued at £14,216, as against 1738 crans and £1615 in the previous year.

Means of Capture.

Decreases in the number of fishermen, boats, and tonnage, as well as in the area of netting, are the principal feature of the means of capture returns. During the past six years there has been an average decrease of about eight boats annually, and, judging from present indications, there is every probability that this falling-off will be equally as much in evidence in the near future. The main cause of this unfortunate state of matters is the gradual decrease of the older fishermen, and the fact that only a few of the younger men bestow any interest on the fisheries. The majority of the latter class now join the mercantile marine, while a number of them also get employment on board of yachts.

Herring Fishing.

A start was made at herring fishing early in June, but the results obtained up to the end of August were of a meagre nature. Early in the autumn, however, a large shoal of herrings appeared between Ailsa Craig and Pladda Island, and as the season advanced these fish were caught in large quantities in Brodick Bay, while towards the end of October they were met with off Inchmarnoch Island. It is somewhat strange, and worthy of notice, that while herrings were unusually abundant in most of the Clyde areas last year, there was a complete dearth of these fish in the once prolific waters of Loch Fyne and Kilbrannan Sound. A fleet of about 400 boats, all of which belonged to creeks in the Clyde districts, were engaged fishing in the district waters.

Drift-net crews were more successful for a time than seine-net crews, so much so that the latter put ashore their trawling gear and fitted out with drift nets.

About three-fourths of the season's catch was purchased at sea by buying steamers and conveyed to market by them in a fresh state.

The herrings, although by no means large, were generally of fair quality, and realised good prices. The season's average price per cran was 20s. 9d., as compared with 18s. 7d. in the preceding year. The average earnings of the drift-net crews for the year were £110, and those of the seine-crews (two skiffs) £600.

Mackerel Fishing.

Mackerel fishing was carried on in conjunction with the herring fishing. None of the crews were equipped with mackerel nets. Small mackerel were exceptionally plentiful in the adjacent waters throughout the months of July, August, and September.

Line Fishing.

Line fishing was unimportant, little attention being given to it. White fish of all kinds were, as in 1905, exceedingly scarce.

Beam Trawling.

Beam trawling is yearly becoming less remunerative to the Rothesay crews who engage in it. It is quite evident that unless flat fish become more numerous in the restricted area, in which the crews are allowed to fish for nine months of the year, this mode of fishing will soon be altogether extinct in the Clyde.

Shell-fish Fisheries.

The shell-fish fisheries of the district are now of little importance. The total value shows a decrease from that of 1905.

Boatbuilding.

A succession of poor herring fishing seasons has told against the boatbuilding trade. The prospects for 1907 are considered more encouraging.

Casualties.

Fortunately, no lives were lost in connection with the fisheries, and the amount of damage done to fishing gear was small.

Barometers.

The barometers at Lochranza and Lamlash are in good condition and well looked after by the persons under whose charge they are.

FREDERICK FRASER,
Fishery Officer.

ROTHESAY, *5th January* 1907.

Greenock District.

Herring Fishing between Ayr and Arran.

The district fisheries were prosecuted with about the usual results. The most important was the herring fishing in the channel between the Ayrshire coast and Arran, where a fairly successful fishing was obtained for several months from July onwards. By far the greater part of the catch was taken on the Arran side of the channel. Some good catches were also got, about the latter end of November, off Largs, where some of the hauls were obtained close inshore. About 160 boats were at work, but the fishing continued for only a few nights, after which the herrings apparently shifted to Gareloch, where a fairly successful fishing was carried on for several weeks. Before the close of the year, however, the fishing fell off very much, the catches becoming very light.

Off Largs.

In Gareloch.

About 170 boats, chiefly seine-netters from other districts, worked in the loch.

The catches ranged up to about 240 boxes, and were obtained principally by seiners. The fishing was also carried on off Greenock, where some fair catches were got up till the close of the year.

Off Greenock.

The herrings, which were partly of medium, but principally of small, size, and generally realised from 16s. to 20s. a cran, were purchased chiefly by buying steamers and carried to the Glasgow market in a fresh state. It is gratifying that a herring shoal should have returned to Gareloch after an absence of a number of years. Catches of exceedingly small herrings were also got in Gareloch in the beginning of the year. They were no larger than sprats.

Off Troon.

About 150 crans were also caught off Troon by a pair of seiners about the latter end of December. The herrings apparently only remained one night, as none were got afterwards.

Herrings taken by Trawlers.

Two trawlers landed at Glasgow, in the month of November, 80 and 86 crans of herrings respectively, taken from the west coast of Ireland. The fish were lightly iced, and of extra large size, and were purchased at from

36s. to 40s. a cran for kippering purposes. They were similar in size to those generally got in Upper Loch Fyne.

A good many crans were also landed at Fleetwood by trawlers, and thence railed to Glasgow in boxes. A number of boxes were also sent direct from Ireland.

Herrings Cured at Iceland.

A Glasgow fishcurer cured on shore at Iceland several thousand barrels of herrings, which were sent chiefly to Gothenburg and America.

Mackerel.

A fair quantity of mackerel was taken in herring nets by the boats that prosecuted the herring fishing between Ayrshire and Arran in the summer months. They were mostly of a small size, and of little value. Quantities were also caught by lines at several stations.

Line Fishing.

At the stations where line fishing was carried on the catches of whitings, codlings, and plaice were very trifling.

Beam Trawling.

About a dozen beam trawlers were at work from Greenock, Largs, and Saltcoats, but their efforts were not attended with much success. Most of the catches consisted of medium-sized plaice.

Crab, &c., Fishing.

The crab and lobster fishing was followed chiefly at Saltcoats, Largs, and Troon, and was a little more successful than in the preceding year.

Exports of Cured Herrings to America.

The exports of barrels of cured herrings to America went chiefly to New York, Philadelphia, and Boston. Small quantities also went to other places in the United States. Some were crown-branded, and a large portion were half-barrels. Nearly all were Scottish and Irish herrings.

Mackerel Exported.

A good number of barrels of mackerel were also exported to these places, and also a large number of cases of preserved fish.

New Trawler.

One trawler, built at Ardrossan, was registered there, but too late to be included in the means of capture returns for this year.

Herring-buying Steamers.

There are about a dozen carrying or buying steamers—two of which belong to Ardrossan, and the rest to Glasgow—which almost constantly attend upon the herring fleet. Their value ranges from about £3000 to £4000 each, and there are about eight men employed on board each vessel. These are not included in any of the appendices.

Supplies of Fish in Glasgow Market.

Fair supplies of all kinds of fresh and smoked fish were in the Glasgow market daily, but many of the lots were of small size. A regular supply of wholesome fish is a matter of great importance to such a vast population as that of Glasgow and its environs. Some idea of the large quantities of fish which pass through the market may be gained when it is mentioned that it is a common thing for as many as 10,000 boxes of the various kinds of fish to be disposed of weekly.

Prices of Cured Loch Fyne Herrings.

Cured Loch Fyne herrings generally sold at from about 32s. to 40s. per barrel, a good many being repacked in kegs and sold at from 3s. 3d. to 3s. 6d. each.

Stormy weather at times hindered fishing operations, particularly in the latter part of the year, when part of the fleet fishing in Gareloch was unable to get to sea on several nights.

E. Gray,
Fishery Officer.

Glasgow, *4th January* 1907.

Ballantrae District.

General Remarks.

Notwithstanding the failure of the herring fishing on Ballantrae Bank, the returns of the district fisheries disclose the fact that the fishermen have had a year of comparative prosperity. This satisfactory position is due mainly to the success of the summer and autumn herring fishings, especially the latter, which was eminently successful. Herrings contributed 72 per cent. of the total quantity of white fish landed, and 57 per cent. of the value.

The cod-net, flounder-net, and line fisheries, while exhibiting variations here and there, were not marked by any very special features. Beam trawling in the Solway was less productive than usual.

Means of Capture.

Beyond some slight changes in the total area of certain kinds of netting, the means of capture returns present little difference from those of the year 1905.

Ballantrae Herring Fishing.

As was the case in the preceding year, and owing to the same cause—a prolonged spell of very stormy weather—the Ballantrae herring fishing was, as already stated, a complete failure. At the beginning of the season "appearances" were reported good, and hopes were entertained that, given a fair chance, a good fishing would result. On the strength of these reports some stranger crews arrived here to take part in the fishing, but during a stay of five weeks were able to get to sea twice only. At the first favourable opportunity they left for home, having earned nothing. The total quantity of herrings caught on the Bank was 383 crans, and this was practically all got towards the close of the season, when only a few boats had herring nets on board. The best shot was one of 83 crans, which proves that herrings must have visited the Bank in considerable shoals.

Summer Herring Fishing.

During the summer months herrings were found pretty generally distributed over the Clyde estuary, and, though they were not in dense shoals, fair, regular catches were obtained throughout the season. The quality was good, and the prices satisfactory. The local fishermen were often employed in the waters of the adjacent districts of Greenock and Rothesay, hence the actual results of their operations are not wholly reflected in the returns of this district. The season was, however, the best experienced for some years past.

Autumn Herring Fishing.

For the second year in succession a phenomenal herring fishing was in progress during the closing months of the year. The most prolific fishing grounds were in the vicinity of Ayr Bay, and in Lochryan. At the latter place some extraordinary hauls were secured by means of seine nets, notably during the week ended 22nd December. Out of one net 305 crans, which realised about £380, were taken. This sum was divided among four crews, another pair of crews having come to the assistance of the owners of the net, which threatened to go to the bottom. The net was eventually lost. But on the following day a further 50 crans, which made £1 per cran, were dredged from the spot where this net sank. There were several instances of large catches, such as the one specified, the details corresponding.

At Ayr, also, heavy catches were not uncommon, but the quality was not quite up to the Lochryan standard, and rather lower prices ruled. The earnings of the seine-net crews for the week referred to varied from £120 to £400, or from £15 to £50 per man. Those using trammel nets did not do quite so well, yet their earnings totalled up to a good round sum. There was no drift-net fishing in Lochryan, the area of the loch being rather confined and the water too shallow to allow of this mode of capture being employed, and these conditions favoured the Campbeltown men, all of whom used seine nets. The year's totals show an increase of 250 per cent. in quantity and 252 per cent. in value compared with those of 1905. Practically the entire catch was dispatched in a fresh or sprinkled state to centres outside the district.

The rich harvest gathered here would seem to account, in some degree at anyrate, for the dearth of herrings in Loch Fyne, for it is currently believed that the fish got here were those which usually visit Loch Fyne.

Clearly it cannot be ascribed to fishing Ballantrae Bank during the spawning season, for this year again the Bank was virtually undisturbed by herring nets.

Cod-net and Line Fishings.

Cod-net fishing and line fishing were carried on concurrently in the early months of the year, and, owing to the weather conditions prevailing, the work was often difficult and hazardous. The drawings from these sources formed a by no means unimportant item in the earnings of the fishermen, representing a sum of about £9000. The quantity landed was augmented by the deliveries of two East Coast crews, who made Girvan their headquarters, and by occasional visits from stranger boats operating in the Firth of Clyde. The general results were rather better than those of the preceding year.

Beam Trawling and Seine Flounder-net Fishing.

The quantity of flat fish taken by beam trawl shows a decrease in weight and value of 22 and 28·58 per cent. respectively, while the results from the seine flounder net were also disappointing.

Mackerel Fishing.

Mackerel were found in abundance all over the district. The quantity landed exceeded the demand. The fish were of a small size, and for this reason were often unmarketable. A greater quantity could have been caught had there been an outlet for them at remunerative prices.

Shell-fish Fisheries.

Lobsters and crabs show a shorter catch, but for the former the value was relatively higher, while the output of oysters was double that of the year 1905, with a corresponding increase in value.

Casualties.

One man lost his life owing to the swamping of a boat at the entrance to Dunure harbour. While at the moment of writing it is reported that two Kirkcolm fishermen, brothers, left Tarbert on 26th December with a boat which they had purchased there, and have not been heard of since. The loss of, and damage to, netting was considerable. The principal causes were weight of fish, rough weather, and strong tides in Lochryan, where most of the losses were sustained.

WM. WARES,
Fishery Officer.

GIRVAN, *7th January* 1907.

APPENDIX N.

STATEMENT showing the Number of Vessels and Boats engaged in Line Fishing during each of the Years 1901–1906, distinguishing those propelled by Steam from those propelled by Sails.

	Sailing Boats.						Steam Vessels.					
	1901.	1902.	1903.	1904.	1905.	1906.	1901.	1902.	1903.	1904.	1905.	1906.
Eyemouth ...	68	42	40	45	48	40	...	...	...	...	...	...
Leith	228	233	220	216	242	240	...	...	1	...	...	5
Anstruther ...	167	168	158	184	182	174	10	8	4	20	21	16
Montrose ...	202	183	174	174	179	165	2	2	...	...	1	1
Stonehaven ...	91	92	88	65	61	55	...	...	...	...	...	...
Aberdeen ...	140	115	110	124	110	71	33	30	25	36	34	39
Peterhead ...	96	83	65	67	71	72	8	11	20	25	30	42
Fraserburgh ...	295	289	262	113	118	135	...	...	1	2	2	2
Banff	256	254	230	239	227	217	...	...	2	2	2	5
Buckie ...	366	362	310	313	332	308	9	12	22	27	38	40
Findhorn ...	146	145	130	102	159	150	3	1	8	10	13	12
Cromarty ...	70	64	60	74	70	96	...	...	...	...	...	...
Helmsdale ...	93	90	80	80	80	72	1	...	2	...	...	...
Lybster ...	44	41	38	33	36	30	...	...	...	...	...	...
Wick	383	358	330	336	383	380	8	2	4	5	8	13
Orkney ...	180	180	172	163	196	200	...	...	...	...	15	...
Shetland ...	530	493	490	581	563	538	...	...	...	...	...	15
Stornoway ...	622	599	585	488	471	469	...	...	...	...	...	...
Barra	177	150	138	169	144	103	...	...	...	...	...	...
Loch Broom ...	270	290	278	245	189	235	...	...	...	...	...	...
Loch Carron & Skye ...	154	152	149	151	142	141	...	...	...	...	...	...
Fort William...	38	34	34	69	63	65	...	...	...	...	...	...
Campbeltown	123	104	110	79	88	87	...	...	...	...	...	...
Inveraray ...	49	49	45	36	41	38	...	...	...	...	...	...
Rothesay .	136	165	166	41	70	121	...	...	...	...	...	...
Greenock ...	234	212	212	80	136	50	1	...	...	...	...	...
Ballantrae ...	209	207	210	195	192	173	...	2	2	2	...	1
Totals ...	5,367	5,154	4,884	4,462	4,593	4,425	75	68	91	129	164	191

APPENDIX O.

RETURN of the Quantity of FISH CARRIED by RAILWAY from each of the Principal PORTS of *Scotland* in the Years from 1899 to 1906. From Returns made to the Board of Trade by the various Companies.

(*Note.*—The figures in the earlier years have been in some cases altered, revised, or added to by the various Railway Companies. It will be understood that the quantity of fish included in this Return is not in some cases strictly the produce of the Sea Fisheries of Scotland, but may include fish brought from abroad as well as river or river-caught fish, and that the gross weight of the fish carried (including boxes, packages, and ice) is in all cases given, as well as regards wet fish as shell-fish.)

Ports from which Despatched.	Railway Company.	Quantity of Fish Carried Away.							
		1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
PORTS SERVED BY MORE THAN ONE RAILWAY COMPANY.		*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Aberdeen, -	Caledonian, -	22,668	25,783	31,865	33,452	37,808	39,731	41,308	40,085
,, - -	Great N. of Scot.	...	...	231	460	351	302	303	324
,, - -	North British,	14,150	17,590	23,309	25,854	25,621	26,111	26,525	25,385
Alloa, - -	North British,	...	...	1	...	24	16	29	23
,, North, -	Caledonian, -	43	36	44	82	37	37	21	11
Annan, - -	Caledonian, -	49	53	50	81	47	100	83	106
,, - -	Glasgow & S.W.,	*	*	*	95	113	58	57	56
Arbroath, -	Caledonian, -	129	89	57	105	79	150	134	81
,, - -	North British,	137	155	169	184	122	115	149	102
Ardrossan, -	Caledonian, -	22	60	53	68	32	13	35	47
,, - -	Glasgow & S.W.,	393	365	1,003	2,566	2,081	780	1,399	1,351
Buckie, -	Great N. of Scot.	1,876	1,650	1,395	1,089	1,385	1,733	998	1,162
,, - -	Highland, -	39	10	47	39	37	65	76	27
Dumfries, -	Caledonian, -	...	59	...	6	...	25	15	67
,, - -	Glasgow & S. W.	*	*	*	3	7	6	5	1
Dundee, -	North British,	524	826	577	835	867	519	398	332
,, West,	Caledonian, -	366	725	477	1,087	1,359	775	1,014	555
Glasgow, -	Caledonian, -	2,669	3,222	3,152	3,537	3,475	3,587	3,097	3,127
,, - -	Glasgow & S. W.	1,182	882	1,225	1,093	1,383	1,318	1,114	907
,, - -	North British,	3,337	2,741	2,469	3,520	3,201	2,335	3,071	2,961
Gourdon, -	Caledonian, -	...	...	...	...	...	...	...	...
,, - -	North British,	726	831	825	924	1,192	1,196	990	1,065
Greenock, -	Caledonian, -	223	238	100	112	132	227	149	167
,, - -	Glasgow & S. W.	428	381	158	178	128	90	114	100
Johnshaven, -	Caledonian, -	...	...	...	...	...	...	...	...
,, - -	North British,	201	180	187	160	268	275	230	226
Leith, - -	Caledonian, -	1,829	1,779	1,890	1,748	1,826	1,616	1,892	1,844
,, - -	North British,	989	941	1,246	1,420	1,561	2,296	3,890	4,131
Montrose, -	Caledonian, -	433	364	340	445	490	386	341	259
,, - -	North British,	412	395	313	834	1,391	887	1,250	868
Perth, - -	Caledonian, -	3	2	86	181	139	133	134	118
,, - -	North British,	9	12	30	53	67	54	55	55
Portree, -	Highland, -	...	379	430	375	305	390	145	414
,, - -	North British,	...	...	94	97	85	114	102	135
Rothesay, -	Caledonian, -	67	51	46	25	65	45	43	111
,, - -	North British,	...	...	17	7	4	2	...	1
,, - -	Glasgow & S. W.	...	...	...	...	57	27	35	54
Saltcoats, -	Caledonian, -	1	20	2	26	7	1	2	17
,, - -	Glasgow & S. W.	431	397	269	96	88	37	69	91
Stonehaven, -	Caledonian, -	758	504	405	445	595	538	532	743
,, - -	North British,	375	332	385	300	219	410	417	496
Stornoway, -	Highland, -	...	...	...	809	370	2	...	...
,, - -	North British,	...	...	122	433	205	446	345	289

* Included under "Other Ports."

APPENDIX O.—*continued.*

Ports from which Despatched.	Railway Company.	Quantity of Fish Carried Away.							
		1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
OTHER PORTS.		*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Bowness, -	Caledonian, -	...	...	...	...	11	9	11	5
Creetown, -	,, -	400	161	128	73	102	109	131	339
Dunragit, -	,, -	23	16	16	9	9	11	10	...
Edinburgh, -	,, -	3,862	2,852	5,170	6,466	8,969	9,818	4,234	5,970
Garliestown, -	,, -	15	7	6	8	...	...	...	...
Glenluce, -	,, -	49	46	32	25	32	29	33	28
Gourock, -	,, -	2,124	1,844	793	679	1,291	553	422	492
Kinfauns, -	,, -	...	1	...	3	...	6	6	6
Millisle, -	,, -	...	...	...	...	6	5	7	6
Muchalls, -	,, -	...	...	...	...	...	4	7	5
Newtonhill, -	,, -	32	51	34	29	34	25	25	21
Oban, - -	,, -	2,820	4,099	3,095	3,648	789	2,174	2,126	2,038
Port Glasgow, -	,, -	1,422	1,168	405	443	62	16	95	473
Portlethan, -	,, -	29	27	23	24	35	31	34	35
Portpatrick, -	,, -	46	82	37	9	3	20	31	56
Stanley, -	,, -	11	15	18	18	33	21	15	20
Stirling, -	,, -	20	26	25	25	5	28	31	29
Stranraer, -	,, -	172	118	92	152	105	96	113	1,039
Wemyss Bay, -	,, -	10	17	25	10	69	133	152	34
Wigtown, -	,, -	1	...	...	...	2	2	...	1
Clyde Piers, -	,, -	...	...	...	...	...	...	...	131
Ayr, - -	Glasgow & S. W.	72	90	121	249	225	130	394	281
Cummertrees, -	,, -	*	*	*	7	1	1	1	...
Dalbeattie, -	,, -	*	*	*	84	1	35	50	44
Dunure, -	,, -	...	...	...	...	...	...	...	195
Fairlie, - -	,, -	2,029	3,630	3,280	2,723	2,262	1,790	1,645	1,550
Girvan, - -	,, -	602	1,153	1,951	1,394	354	429	432	525
Irvine, - -	,, -	*	*	*	15	26	14	95	68
Kirkcudbright,	,, -	*	*	*	44	19	47	47	38
Largs, - -	,, -	*	*	*	35	15	19	36	77
Mardens, -	,, -	...	...	...	...	...	...	...	40
Maybole, -	,, -	*	*	*	34	26	23	41	11
Pinwherry, -	,, -	*	*	*	36	21	38	7	15
Southwick, -	,, -	*	*	*	9	...	...	...	3
Troon, - -	,, -	*	*	*	3	1	9	9	4
West Kilbride,	,, -	*	*	*	25	7	30	20	12
Kyles of Bute Piers,	,, -	...	...	...	...	28	44	...	*
"Other Ports,"	,, -	363	429	434	...	...	...	65	194
Banff, - -	Great N. of Scot.	152	71	48	39	35	26	62	107
Boddam, -	,, -	305	159	86	9	7	38	22	14
Buckpool, -	,, -	30	19	16	19	17	25	31	24
Cairnbulg, -	,, -	...	...	...	...	27	68	48	55
Cruden Bay, -	,, -	160	115	68	84	57	79	63	60
Cullen, - -	,, -	131	48	62	106	35	45	22	33
Ellon, - -	,, -	...	...	...	...	...	...	...	...
Findochty, -	,, -	305	220	128	130	107	240	172	179
Fraserburgh, -	,, -	2,973	3,363	3,412	3,290	3,162	3,563	3,922	5,759
Glassaugh, -	,, -	61	35	19	36	39	37	28	28
Ladysbridge, -	,, -	327	185	117	267	317	387	381	431
Lonmay, -	,, -	21	23	21	12	11	13	10	21
Lossiemouth, -	,, -	357	398	248	347	252	308	190	216
Macduff, -	,, -	722	496	446	485	375	597	562	647
Peterhead, -	,, -	2,513	2,987	3,565	3,891	5,106	5,780	5,567	6,336
Portgordon, -	,, -	14	9	...	...	3	...	...	44
Portknockie, -	,, -	359	113	86	64	109	76	37	81
Portsoy, -	,, -	123	103	44	82	63	68	46	107
Rathen, - -	,, -	68	64	54	48	28	...	...	...
St. Combs, -	,, -	...	...	...	...	9	49	78	98
Achnasheen, -	Highland, -	...	...	8	4	5	3	12	6
Alness, - -	,, -	9	8	10	9	4	4	5	6

* Included under "Other Ports."

APPENDIX O.—*continued.*

Ports from which Despatched.	Railway Company.	Quantity of Fish Carried Away.							
		1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
OTHER PORTS—*continued.*		*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Altadale,	Highland,	...	...	...	...	4	1	...	...
Avoch,	,,	...	...	83	83	109	...	105	88
Beauly,	,,	1	3	5	8	...	...	1	...
Bonar Bridge,	,,	13	33	25	30	25	...	41	23
Brora,	,,	46	42	28	28	15	26	16	18
Burghead,	,,	324	417	220	153	81	78	45	49
Conon,	,,	...	...	10	18	13	13	9	9
Dingwall,	,,	21	10	1	...	...	...	6	55
Duirinish,	,,	75	17	26	49	39	29	12	2
Edderton,	,,	...	...	...	...	...	...	4	3
Embo,	,,	...	...	...	17	17	16	8	36
Fearn,	,,	197	147	132	111	114	162	157	136
Fochabers Town	,,	117	102	124	110	121	118	105	77
Forres,	,,	6	10	12	12	18	24	15	20
Forsinard,	,,	29	31	4	44	...	...	21	30
Fort George,	,,	17	21	...	...	14	26	24	21
Fortrose,	,,	19	26	25	24	24	23	21	13
Garve,	,,	18	25	12	35	22	21	25	26
Golspie,	,,	16	10	14	7	21	13	8	16
Helmsdale,	,,	224	265	272	228	248	255	149	168
Hopeman,	,,	279	401	368	272	136	118	53	39
Invergordon,	,,	28	42	41	45	25	31	13	28
Inverness,	,,	102	286	587	70	382	1,710	153	268
Kildonan,	,,	...	...	...	...	...	...	...	...
Kinbrace,	,,	2	...	...	3	1	2	6	7
Kinloss,	,,	50	67	79	60	59	64	52	36
Kyle of Lochalsh	,,	5,257	5,976	8,455	4,505	4,062	5,587	4,236	3,331
Lairg,	,,	22	20	20	25	1	22	24	31
Loth,	,,	7	1	...	...	...	...	...	...
Lybster,	,,	...	...	...	114	114	202	224	218
Muir of Ord,	,,	9	4	...	...	...	...	...	...
Nairn,	,,	66	83	70	86	83	99	78	91
Novar,	,,	3	3	...	...	...	...	2	1
Occumster,	,,	...	...	...	...	...	3	2	...
Plockton,	,,	61	19	17	45	49	48	8	36
Strathcarron,	,,	8	28	28	19	6	7	10	9
Strome Ferry,	,,	189	52	96	144	108	64	110	120
Tain,	,,	10	2	...	13	...	...	...	...
The Mound,	,,	41	31	24	11	...	...	...	...
Thurso,	,,	2,200	1,174	3,416	1,689	1,895	3,016	1,523	694
Ulbster,	,,	...	...	...	14	14	39	22	22
Wick,	,,	2,517	2,265	2,390	4,566	4,160	4,673	2,061	3,097
Abernethy,	North British,	4	4	4	3	3	4	6	4
Anstruther,	,,	4,788	7,866	6,924	8,394	5,415	6,573	5,888	5,340
Ayton,	,,	2	2	4	4	9	3	9	4
Bervie,	,,	68	99	73	78	92	80	95	71
Boarhills,	,,	2	8	2	2	2	2	2	2
Bo'ness,	,,	5	10	25	30	41	134	51	34
Buckhaven,	,,	21	74	73	225	172	162	205	102
Burnmouth,	,,	219	356	331	289	253	226	224	125
Burntisland,	,,	...	...	4	4	3	1	...	...
Charlestown,	,,	...	...	3	3	...	12	6	1
Cockburnspath,	,,	184	135	158	168	142	126	103	117
Craigendoran,	,,	...	...	3	7	...	...	7	46
Crail,	,,	308	292	179	158	217	274	287	177
Dunbar,	,,	635	901	524	708	895	1,046	1,029	1,154
Dysart,	,,	3	2	4	3	2	6	7	6
Elie,	,,	1	60	26	15	7	7	8	4
Eyemouth,	,,	4,159	4,773	2,404	4,783	2,779	3,648	5,123	6,142
Fort William,	,,	7	3	5	19	10	1	6	6

APPENDIX O.—*continued.*

Ports from which Despatched.	Railway Company.	Quantity of Fish Carried Away.							
		1899.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
OTHER PORTS—*continued.*		*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Grangemouth,	North British,	83	11	114	234	239	44	72	34
Granton,	,,	103	23	20	16	638	1,019	5,001	6,260
Helensburgh,	,,	73	74	68	52	44	63	80	165
Innerwick,	,,	23	15	21	18	24	12	24	19
Inverkeithing,	,,	5	5	47	4	4	67	...	...
Kincardine,	,,	161	127	29	388	256	202	135	86
Kinghorn,	,,	1	2	2	2	8	6	7	2
Kingsbarns,	,,	70	96	43	65	26	57	49	50
Kirkcaldy,	,,	...	8	2	25	12	3	11	1
Largo,	,,	76	81	97	311	88	53	57	105
Lauriston,	,,	27	26	37	16	31	36	51	23
Leven,	,,	...	3	6	4	5	3	10	3
Longniddry,	,,	...	...	...	...	...	...	...	...
Lunan Bay,	,,	3	6	7	7	6	3	5	2
Mallaig,	,,	...	...	1,917	2,632	2,508	3,942	3,589	4,810
Musselburgh,	,,	186	148	143	140	194	32	22	18
Newburgh,	,,	251	209	141	3	9	15	12	14
North Berwick,	,,	27	66	86	105	29	22	26	26
Pittenweem,	,,	288	323	436	756	494	630	642	813
Prestonpans,	,,	33	40	46	32	44	20	15	17
Queensferry, So.	,,	10	...	...	...	5	5	...	...
Reston,	,,	143	130	143	98	107	85	72	92
St. Andrews,	,,	668	492	309	287	474	255	210	171
St. Cyrus,	,,	23	15	20	17	27	...	...	...
St. Monans,	,,	1,181	1,584	1,554	2,109	2,103	1,840	2,172	2,324
Tayport,	,,	190	7	143	144	209	3	35	63
Trinity,	,,	111	115	69	28	13	6	44	6
	TOTAL,	103,317	115,104	130,022	142,904	141,153	151,271	146,895	153,188

APPENDIX P.

DEVELOPMENT OF A SCOTTISH MACKEREL FISHERY ON THE WEST COAST.

Précis of Reports by Fishery Officers on the Season of 1906.

Only in Barra and Loch Carron districts is a regular mackerel fishery pursued; in other districts the fish are landed solely from herring nets, and are not sought after independently.

Barra.—The results for the last three years will be seen from the following Table:—

	1906.	1905.	1904.
No. of boats engaged - -	84	94	64
Cwts. landed - - - -	4,603	4,184	2,757
Value - - - - -	£716	£999	£678
	s. d.	*s. d.*	*s. d.*
Average price per cwt. - -	3 1	4 9	4 11
Number of curers - - -	3	5	5
Barrels cured - - -	1,304	1,689	800
Barrels exported to U.S.A. -	700	1,589	610

Thus, although fish were plentiful in 1906, the season otherwise was not encouraging. In Barra the fish cannot be disposed of fresh. The American markets were depressed in summer, with the result that only three Lochboisdale merchants—indeed, only one to any extent—carried on curing operations. At Castlebay most of the good catches secured in herring nets had to be thrown overboard. South Uist fishermen could get sale for only a portion of their catch, and cured the remainder themselves. Owing to the failure of the Irish fishing, the American demand improved, and fishermen are likely to get disposed of some of the cured fish on hand. The success of the herring fishing in July and August had an adverse effect on the mackerel fishing.

Loch Carron and Skye.—Here the fish are readily bought for the southern markets, and the season of 1906 was distinctly successful, and a considerable improvement on the previous two years.

	1906.	1905.	1904.
No. of boats engaged - -	52	32	30
Cwts. landed - - - -	8,219	3,334	4,678
Value - - - - -	£3,111	£946	£1,588
	s. d.	*s. d.*	*s. d.*
Average price per cwt. - -	7 7	5 8	6 9

Of the 52 boats, 24 were fully equipped with mackerel nets, the remainder having partly herring nets and partly mackerel nets. Only 85 barrels were cured. The want of an ice-house at Kyle is a great drawback. Ice costs £2 per ton, too dear to be stocked at the risk of waste if fish are not being received, and often not on hand when good fishing landed, by which the fish suffer.

Stornoway.—Here fish were plentiful on the inshore grounds, but they were secured only by boats engaged in herring fishing. In the month of January alone 1614 cwts. were landed, valued at £1053. These were despatched to the English markets fresh. No demand existed in the summer and autumn months, and the quality was not so good. 235 barrels were cured for export to New York.

	1906.	1905.	1904.
Quantity, cwts. - - -	3,570	684	649
Value - - - - -	£1,435	£174	£213
	s. d.	*s. d.*	*s. d.*
Average per cwt. - - -	8 0	5 0	6 7

Loch Broom.—No mackerel despatched from the district, either cured or fresh. During October crews had as high as 14 crans off Gairloch and Loch Ewe. The fish were of fairly good size, but for lack of a curer all were thrown overboard.

Other West Coast Districts.—In all the southern districts mackerel-catching is not dissociated from herring fishing, and it is not likely to be so. In Lochfyne, Rothesay, and Ballantrae mackerel were plentiful, but they were of small size and poor quality. In Lochfyne, in July, August, and September, more might have been caught, but many boxes were put into the sea for want of buyers. As it was, buyers often took mackerel because herrings were so scarce, otherwise the average price (4s. 6d. per cwt. in 1906) might have been still lower. No demand seems to exist in Glasgow for fresh mackerel, and the fish are too small for the English markets.

Edinburgh, 16th January 1907.

APPENDIX Q.

ENQUIRY INTO THE RELATIVE MERITS OF CUTCH AND TANNIC ACID AS PRESERVATIVES OF HERRING DRIFT NETS.

East Green,
Anstruther, 1*st December*, 1906.

Sir,

As requested by your letter of 18th July last, I beg to submit the following report on the two nets—one barked by cutch and the other by tannic acid—which were handed to me at Aberdeen in August last for the purpose of testing which agent was the most suitable for the preservation of herring drift nets.

The nets were received too late in the season to test them at the summer herring fishing, so I resolved to take them to the English coast and test them there. They were placed in the middle of the drift, and were both subjected to the same usage. Between the 18th September and the 6th October they were shot seven times, but on these seven occasions there were no herrings in any of the nets.

On the 9th October a take of 88 crans was secured. On hauling the nets it was found that the net which had been cured by tannic acid would not bear the strain of hauling, although it was no better fished than the other nets. Only a part of the net was recovered, and it was found to be quite rotten, while the net which had been barked with cutch was quite fresh, and, in fact, was used for another week without preserving it in any way, after which it was dried and found to be in good condition.

The test to which the two nets were subjected shows that cutch is far more suitable as a preserving agent for herring drift nets than tannic acid.

I am, &c.,
(Sgd.) John Mackay.

The Secretary,
Fishery Board for Scotland,
Edinburgh.

APPENDIX R.

HERRING TRADE ON CONTINENT.—REPORT OF VISIT OF INSPECTION OF ASSISTANT INSPECTOR OF SEA FISHERIES.

Fishery Office,
Inverness, 19*th November* 1906.

Sir,—With reference to your letter of 3rd May last informing me that I had been appointed to proceed to the Continent to report during the months of August, September, and October, on the import of Scottish cured herrings and the market therefor, I left Leith on 1st August, arriving in Hamburg two days later, and returned to Scotland on 31st ultimo. During my sojourn, I visited Hamburg, Stettin, Danzig, Königsberg, and Libau, and several of the smaller towns. I beg to forward herewith my report thereon.

I have the honour to be,

Sir,

Your most obedient Servant,

JOHN SKINNER,
Assistant Inspector.

The Secretary,
Fishery Board for Scotland,
Edinburgh.

HAMBURG.

The import of East Coast herrings for the season had just begun, and, notwithstanding that there were 14,000 barrels in excess of the previous year, there was a good demand and prices were satisfactory. The principal imports of fish are herring and cod, but the various modes of preparation of the former far exceed those practised in any other district I visited. The imports of dried cod are chiefly from Norway, the bulk of which is intended for transit to Italy, Africa, and South America.

No crown branded herrings had as yet come to hand, but I learned that there was every prospect of a good demand for these. Part of one of the cargoes of unbranded herrings, which I saw inspected, was from Baltasound, and part from Lerwick. The herrings were a perfect cure, but in some cases the selection was defective. The packing in bottom of barrels and filling up was excellent. A large proportion of the imports are sold *ex* ship, and conveyed inland by barges, many of them with a carrying capacity of from 1000 to 2000 barrels, through the numerous canals and waterways by which North Germany is intersected. The attention given to the herrings bought direct by inland dealers varies considerably from that practised where they have to go into store to await a buyer. In fact, many of the herrings must reach the interior in very poor condition, as they are frequently transferred direct from the ship into a barge without repickling.

Owing to the excessive heat in the interior the demand at this period had slightly fallen off, and taking opportunity of a lull in the sales I proceeded to Geestemunde and Elsfleth, the latter place being about twenty miles west of Bremerhaven, on the Weser. At Geestemunde, the Hochsee Fischerei Company had a fleet of nine large steamers, all of which were employed at herring fishing during the summer, and in winter at trawling. Lying on the piers there were about 20,000 empty herring barrels, besides about 6000 which had been shipped on board the fleet. Geestemunde is the chief port for the sale of white fish in Germany. The harbour, with its ice stores and facilities for packing, etc., has within the past three years been extended at a cost to the Government of £34,000. At Elsfleth there were two Herring Fischerei Companies. One of the companies had a fleet of 6 steamers and 4 sailing vessels, and the other, 20 sailing craft. In preparation for the season's herring fishing both companies had stocks of from 16,000 to 17,000 empty barrels on hand. At Leer, Brake, Nordenham, and Vegesack, there were similar companies with large stocks of barrels and salt. The Nordsee Company of Nordenham were the first of the German fleets to attempt trawling off the coast of Morocco. This season their attention was directed to the herring fishing at Iceland, which is 1000 miles from the Weser ports. They had bought a wooden sailing vessel of about 2000 tons, and sent her with 50 Norwegian women to Iceland. On board were coals and provisions for the steamers employed in the herring fishing. From reports to hand the fishing in that direction was prosecuted with a large measure of success. In 1904, the combined German fleets employed in herring fishing were 157 vessels; in 1905, 186; and this season, 215. These figures give an idea of how rapid is the growth of the deep-sea fishing industry. Sailing vessels engaged in the herring fishing receive from the Government a subsidy towards the coast of building, and a further sum for equipment. The Danish petroleum motors find favour with the Baltic fishermen, about a score being in use in the Kiel district. Recently the Government started collecting and publishing a monthly statement of the quantities of fish landed, and are giving every encouragement to deep-sea fishers.

During the week ended 15th September I again visited Hamburg. At this period there were very few early Shetland or East Coast herrings in store. Those on hand had had a reserve price placed upon them, with the result that owing to the unkeepable nature of the herrings only some 10 to 12 marks per barrel were offered for them. A few hundred barrels were saved by being put under cold storage treatment, but under ordinary storage accommodation every week added to their deterioration. The imports now arriving were nearly all crown brands, the bulk of which had been contracted for in Scotland and forwarded to the interior direct. In the total import there was a considerable increase and a further rise in price. Norway, Holland, and Germany were taking advantage of the rise in price, and had placed upon the market several thousand barrels, besides large quantities of cut herrings and brittling (sprats) from Norway. Of cut herrings there are eleven different sizes, running from 18 to 20 fish per kilo, down to 70 to 90 fish. One of the principal importers of this class of herring informed me that about 20,000 barrels are annually placed upon the market. The average number of cut herrings in a barrel is about 6000. These are nearly all purchased for preserving purposes. The chief markets are Austria, Saxony, and America. In Austria and Saxony they are prepared and put upon the market as Russian sardines. About 3000 barrels of brittling (sprats) are also annually imported. A few half barrels were, I noticed, preserved with herbs and spices; under this treatment they are named anchovies, and realise high prices. If imported in this state the duty is about 12s. per barrel, whereas in a green state, with merely pickle as a preservative, the duty is 3s. To save the higher tariff, a large quantity had been preserved in the former way after arrival at Hamburg. On this occasion I visited Altona and Schluput. At the former place there are 26 fish preserving factories, and at the latter 19. Besides, there are 8 at Harburg and 3 at Lubeck. Altogether, there are 56 herring and sprat preserving factories within a radius of 30 miles of Hamburg. Altona and Schluput make large purchases of fresh herrings for smoking and preserving. I am indebted to one of the importers for the following statistics of fresh herrings imported from Scotland, England, Sweden, and Norway since the beginning of the year:—

	Scotland.	England.	Sweden.	Norway.
Up to 12th Sept., 1906.	½-*Cran Packages.* 67,821	½-*Cran Packages.* 48,301	½-*Cran Packages.* 60,062	½-*Cran Packages.* 111,990

The total import from all places up to 12th September was 144,087 crans. The total for 1905, for the four countries, was 275,171 crans. As a result of the increased communication with England, the import for the current year will probably exceed these figures. The packages from Scotland and England varied slightly in size, but it has been agreed by the English, Scottish, and German exporters of fresh herrings from Great Britain to Germany, that on and after 1st January, 1907, all packages be new and of a uniform size, with a capacity of half a cran each.

The trawling industry at Altona, which is the landing place for white fish at Hamburg, is annually increasing, with the result that the auction mart there, already a large and spacious building, is to be enlarged to about double its present size. Four years ago there were only some 30 trawlers belonging to Altona and Hamburg. At present there are 51, and at the close of the current year, with the number in course of construction, there will be a fleet of 70 trawlers. Four of these vessels are being built at Aberdeen. Although new markets are being constantly opened up, both in the manufacturing and mining countries, the great demand for fish is due to the high tariff on almost all kinds of live and dead meats imported.

STETTIN.

On leaving Hamburg I proceeded direct to Stettin. On my arrival there I made the acquaintance of the principal herring importers, who were all most courteous, and ready to welcome me as the Board's representative. Previous to my arrival 5000 barrels of herring were destroyed by fire. From inquiries on the spot and from the effects of the fire which I had witnessed, I learned that 1000 barrels of these were Norwegian vaar herrings, the balance being Scottish. The loss, exclusive of erections, amounting to about £7000, was covered by insurance, the greatest losers being the Government, who had to refund the duty. Unbranded herrings were coming in in large quantities, but as yet very few branded herrings had arrived. Although the imports showed an increase of 17,000 barrels, as compared with the corresponding period of 1905, there was a good demand. Unfortunately the early Shetland and East Coast herrings had not given satisfaction, and buyers only purchased for immediate requirements, the result being that of 20,000 barrels then in store only about one-third was sold. Several of the buyers wished me to impress upon the curers the necessity of having the long-gut removed from these early caught herrings, even at greater cost per barrel. As the season advanced there was a marked improvement in the quality of the herrings imported. The imports are nearly all exposed for sale *ex* ship. Owing to the limited accommodation they are often placed two and three tiers high on the piers. On one occasion I estimated that 7000 barrels were exposed, on the piers, to a broiling sun. In many cases they were covered with matting and watered down. As opportunity offered they were, however, removed to store. Almost without exception the storage accommodation was excellent. On several occasions from 40 to 50 persons, including importers, managers, &c., attended the sales.

At this stage several thousand barrels of Norwegian vaar herrings had arrived. I learned, from one of the Haugesund herring exporters whom I met that there were from 12,000 to 13,000 barrels still to ship. These herrings have a dry and scaleless appearance. They do not interfere much with the sale of Scottish-cured herrings. In the head ends they were neatly made up, in close imitation of the Scottish method, but in the bottom ends they were laid flat. They were cured chiefly in March last, but were only then being exported. Norwegian holders do not consign these; they are mostly sold c.i.f. to agents, price 15 to 16 marks per barrel. Owing probably to the shortage in the catch on the East Coast the price of these herrings, later in the season, advanced 2 to 3 marks per barrel. One of the importers bought these herrings by weight, but this is not a customary method of purchase. In visiting the stores I noticed one of the firms repacking these in Scottish-made second-hand half-barrels.

Small parcels of Iceland-cured herrings were now on the market. These herrings were of a large size, running from 350 to 400 to a barrel. They were fat and oily and did not appear to be in favour. They were purchased chiefly for smoking purposes; but I was informed that under this process they lose the fat and become dry and unpalatable.

Later in the season I again visited this port and found that, notwithstanding increased imports from Scotland, Holland, and Germany, and of fat herrings from Norway, prices had risen considerably. Crown brands were from 5 to 10 marks per barrel higher than at the same date last year. Unbranded herrings, of average cure, sold at from 3 to 5 marks per barrel less than those branded. With regard to Norwegian fat herrings, they are, in size, not unlike Loch Broom and Inverness herrings. On this occasion I was invited by several of the importers to visit their stores, one of whom was anxious to show me both his good and his inferior herrings. The early Shetland and East Coast herrings, to which I have already referred, had not improved. The bellies of the fish of several samples I saw consisted only of bones. In some cases, when the ends were removed, it was difficult to recognise what was in the barrels. Several samples were in a state of putrefaction. On the other hand, a number I saw, although oily and torn, were saved owing to there being some salt in the barrels. I was informed that several parcels of these early herrings had been returned to the East Coast, as curers had affected not to understand what had gone wrong with them. These early caught herrings had no effect whatever upon the market; they were entirely neglected. Until the cool weather set in nothing could be done in the way of despatching them to the interior. The hot weather has had a most damaging effect upon deck cargoes of early caught herrings. In one case the receivers came upon the owners of the vessel, who had to pay £150 as damages.

One of the importers asked me to have a look at a parcel of Crown

Fulls cured at Lerwick, which, he said, the buyer had rejected because they were roused herrings. On inspection I found that, although the fish, when the end was removed, looked a little dim in colour, possibly owing to the heat, they were sound, well scaled, but somewhat hard cured. The bottom ends looked bright, and the fish were nicely salted. The fact is, that the buyer found they were hard cured and did not suit his market; otherwise, they were in good order. Another importer desired that I should inspect a parcel of Crown Fulls cured on the west side of Shetland, which, he said, the buyer had rejected because of heavy salting. Out of 10 barrels opened not one was heavily salted. The importer's manager admitted after the inspection that they were an excellent lot and that he was quite satisfied with the parcel.

Several parcels of German-cured herrings (matjes) caught and cured on the Shetland Coast came under my notice. I was somewhat disappointed with the cure and packing, as the first lots I saw were well done up. In the bottom ends they were heavily salted and the filling was slack.

With regard to the stencilling of a crown on barrels containing herrings, copies of which have been submitted to you, and which has already formed the subject of correspondence, there was no port on the coast of Germany where I noticed imitations of the crown brand so much used as here. To the buyers or consumers in Roumania and Austria-Hungary the crown on the end of a barrel appears to carry with it a guarantee. Almost every importer and dealer in Norwegian vaar herrings stencils these with a crown of one description or another, and I was told that occasionally unbranded Scottish herrings are marked with a crown and the description of the herrings lettered in English. One of the importers mentioned to me that when an order is received, or when a buyer comes forward from the afore-mentioned countries to purchase vaar herrings, he stipulates that he must have a crown as a trade mark on the ends of the barrels. The question was asked, whether it was not to mislead the consumer, but the difference in price, he said, was so great that this can hardly be the case. But, doubtless, before they reach the purchaser in a small way they would be retailed at the same rates as the Scottish herrings purchased at double the money.

During the last days of my visit the first cargo, for the season, of Yarmouth herrings arrived. Much interest was evinced in the inspection of this cargo, but the prices being limited, and reports of a good fishing being landed, no sales were effected. The quality, however, was excellent, and the packing and filling up all that could be desired. The herrings were chiefly mat-fulls and matties.

Before leaving Stettin I had an opportunity of visiting the Oderwerke Shipbuilding Yard, where two trawlers, one 125 and the other 120 feet long between perpendiculars, had recently been launched. Both vessels were supplied with steel boilers and fitted with triple-expansion engines of 400 horse power; speed 11 knots; electric light—the larger with winch, 2 drums, to accommodate 1000 fathoms each, of wire rope; the smaller with winch, 2 drums, to accommodate 750 fathoms rope. The vessels were of steel, classed German Lloyd, A/4 K (B). The cost of the larger was £7500. This vessel appeared a most formidable fishing craft. The accommodation, fitting, and workmanship were excellent. They were the first trawlers ever built at Stettin, and were for Altona and Hamburg owners.

DANZIG.

I arrived here on the 20th August. The importation of Scottish-cured herrings was 12,000 barrels ahead of the corresponding period of 1905. Only a few hundred barrels of West Coast matjes are consigned to this market. Dealers are not inclined to give 70 to 80 marks per barrel for these. They prefer to wait for cheaper herrings. For mat-fulls, matties, spents, and tornbellies there is always a good demand. The best Crown brands are a luxury in the neighbourhood. They are nearly all bought up for Russia. At the date of my visit there were from 27,000 to 30,000 barrels lying in store. Owing to hot weather stocks had accumulated in store. Previous to my visit the herrings forwarded to South-West Russia arrived there in an entirely burnt condition. The unsettled state of Russia had a very unfavourable effect upon the herring trade of this port. Herring importers had to exercise the greatest caution with buyers, as the revolution has had the effect of making them dilatory in their payments. The markets reached from here are in South-West Russia, and as far east as Moscow, Galicia, Poland, and also Eastern Pomerania. Two-thirds of the quantity in store were for Russia. Through the energy and business ability of one of the firms the import of Scottish-cured herrings has within recent years considerably increased. The method of sale and inspection is slightly different from that at Hamburg or Stettin. At both these places the imports are chiefly inspected on the piers. Here, on the arrival of a cargo of herrings, it is taken to the importer's yard and invitations are sent round to buyers to inspect and make offers. At this date only a few barrels of Crown-branded fulls, mat-fulls, and matties, had arrived. At one of the stores I met several Russian Jews having an inspection of these, and all appeared to be pleased with the selection, salting and cure of the different brands. The complaints, so far, by agents and buyers of unbranded herrings were that they were too oily slack filled, and tender in the bellies. From observation, in many cases, these complaints were well founded.

My second visit to Danzig was in October. It was then estimated that upwards of 70,000 barrels were in store, but of this quantity fully three-fourths had been sold. Besides the importers, there are eight Russian brokers (commissionaries), who buy and leave the herrings in the importer's store until an order is received for their despatch to the interior.

The early herrings which I saw during my first visit had not improved in store. The remainder of several parcels was being slowly disposed of at from 6 to 10 marks per barrel for animal food stuff. Several of the importers mentioned to me that this had been the worst season they had experienced for many years back as regards complaints.

Since February last upwards of 6000 barrels of Norwegian vaar herrings had been imported to this market. The price paid some months ago was 20 marks per barrel.

About 300 barrels of Iceland-cured herrings had been imported. Great difficulty, I understand, is being experienced in disposing of them. They are too large and oily for this market. Samples had been despatched to the interior of Russia, but up to the date of my departure no word had been received of them.

KÖNIGSBERG.

From Danzig I proceeded to Königsberg. Here I found the imports of Scottish-cured herrings 56,000 barrels in excess of the figures at the corresponding period of last year. During the week of my visit five steamers had arrived from Shetland, Orkney and the East Coast, with a total of 19,000 barrels. Of the season's imports 70,000 to 80,000 barrels were in store, fully two-thirds of which were sold. The great herring stores for Russia are at this port. Storage accommodation is most extensive, and I may add that these stores are large, costly erections. One of the importers has storage accommodation for 26,000 barrels. Fully two-thirds of the imports are sent into Russia. Supplies are also sent to Galicia and Roumania.

There are seven herring importers belonging to this place, all of whom I had called upon. Besides, there are from 25 to 30 herring agents—nearly all of whom are Russian Jews. These latter go under the name of commissionaries, and almost every barrel passes through their books to the "committer," the person in Russia who sends on the orders. On every transaction there is a commission of 6d. per barrel. I have met these people in groups, at the different stores, inspecting the herrings. The importer grants the buyer one month's storage accommodation free, after which he charges a small fee per barrel for pickling, etc., which is done every six weeks.

The few Crown brands that had come in were from Baltasound, Lerwick, Stronsay, and Lossiemouth, and, as regards quality, filling, and salting, they had given satisfaction.

Complaints of deck cargoes of herrings having been spoiled with sun-heat were also made to me here. One of the importers informed me that his loss in one case alone amounted to 3000 marks.

Several of the stores were visited. One of the importers showed me a sample of a parcel of early Shetland-cured herrings. The parcel was consigned, and, fortunately for the curer, with the exception of a small balance, was sold on arrival. The herrings were oily and perfectly rotten for want of salt. A sample of another parcel was shown me, twenty barrels of which were unsold. The herrings here were equally bad for want of salt. The same importer informed me that, notwithstanding the above cases, he did not think there would be so many spoiled herrings as last year, because curers had given a little more salt. Russian buyers, he said, although much opposed to seeing salt, find that without a little the herrings will not keep, and in course of time they will get accustomed to more being put on. In another importer's store I was shown a sample of a parcel of early Shetland matties. They were all in a mess, and smelling badly. The bottom ends also of these barrels were opened, but, although the appearance of the herrings in them was not so bad as in the case of the head ends, scarcely one passable fish was observable. Parcels were shown me at other stores of early Shetland cure which had deteriorated from want of salt. Another importer whom I saw was filling up a large parcel of mediums, cured on the Berwick coast, which he purchased on speculation. Each barrel would take from two to three tiers of herrings. The herrings were not sufficiently cured. They were in course of deterioration owing to an insufficiency of salt. The importer estimated that he would lose 15 marks on each barrel. At the same store four barrels were shown me of Dutch-cured herrings. The packing and filling-up was after the Scottish method, but the herrings were not so bright in colour nor so well scaled as the Scottish Crown brands. The head ends of the barrels bore the imitation of a crown.

I was interested in Stornoway winter-cured herrings, these being somewhat similar to Norwegian vaar herrings. One of the importers showed me two barrels of a parcel which were heavily salted and had to be repacked. These were found to be in good order, every herring sound. Four barrels of another parcel were also shown me, 30 of which had gone bad. The herrings were full of milt and roe—large, heavy fish. In two of the barrels there was not a particle of salt, and the fish were in a state of deterioration. The herrings in the other two were not so bad, but I expect that in a few more weeks putrefaction would set in.

Several parcels of trade-marked herrings came under my notice.

While the cure in some cases was firm, in others the fish were soft. The latter were in prime condition for immediate use, but in a season such as we have passed through a considerable risk was being run. I was informed that particular parcels realise a better price than Crown brands. No doubt, they show an excellent finish to attract the buyer, which would be to the benefit of the average curer to copy. When an order is received for any of these trade-marks, and only a few parcels are on hand, advantage is taken of the circumstance for the benefit of the curer, and from one to two marks more per barrel asked for and secured. The trade-markers' matties contain a large number of mat-fulls, but it is doubtful whether the extra mark or two obtained will cover the additional cost of this selection.

Early in October, Königsberg was again visited. Since the date of my last visit 96,000 barrels, exclusive of Norwegian and Dutch herrings, had come in. The business in Scottish-cured herrings was somewhat dull owing to the Jewish holidays, but the trade upon the whole was very satisfactory. Although the quantity in store had increased by about 15,000 barrels, the greater portion of these was already purchased by Jewish buyers, who were awaiting orders for their despatch to the provinces of Russia, Silesia, and Roumania.

One of the cargoes of herrings which arrived was that of 5000 barrels, chiefly unbranded herrings, from Aberdeen. The buyers, it appears, found the contents of some of the barrels damaged by heat, with the result that the entire cargo was rejected. Sworn surveyors were appointed, and every barrel was opened. They reported that 940 barrels were found more or less damaged by heat, and 19 rendered valueless. The loss was estimated at 8000 marks.

I was asked by one of the merchants to inspect a parcel of Crown mat-fulls from Aberdeen, which he said were only matties. The fish, on inspection, turned out very satisfactory, and the merchant was satisfied that they were according to contract.

Shipments, I noticed, were made of empty second-hand Scottish barrels to Rotterdam. These barrels were to be filled with Dutch herrings. They were thoroughly washed and repaired. I learned that they could be delivered in Holland for 2·30 marks per barrel. About 8000 barrels are annually exported to Rotterdam. At other ports I have also noticed second-hand Scottish barrels being shipped to Holland. Dutch herrings were frequently quoted on the markets in Scottish barrels.

LIBAU.

Towards the end of September I proceeded to Libau. Altogether there were 14 importers of Scottish herrings, but the business was practically in the hands of eight firms, all of whom I called upon. The import of Scottish-cured herrings was 23,000 barrels in excess of the corresponding period in 1905. Of Norwegian vaar herrings there were 18,000 barrels imported, as against 1000 last year. In store there were about 50,000 barrels, as against 22,000 at the same date in 1905. Nearly all those in store were in the hands of importers, who were also speculators. The increase this season of over 40,000 barrels in the import is due to the fact of the herrings which go into Russia *via* Archangel being placed—as regards duty—on the same level as herrings entering at other Russian ports. For the past four or five years Scottish and Norwegian herrings entered Russia by way of Archangel duty free, to the disadvantage of Libau and Riga.

I was informed that the herring trade of Libau was carried on this season on an exceptionally sound basis. Early in the season the importers, realising the unsettled state of the country, and that a revolution might at any time break out, resolved that transactions with buyers in the interior be conducted on cash lines, with the result that the business, so far as they were concerned, had been a fairly profitable one.

Of East Coast and early Shetland herrings the quantity in store was estimated at 500 barrels. In visiting the stores I saw a few samples of these, all of which I found in fairly good order. The first arrivals of East Coast herrings were sold at about 10 roubles per barrel, and, as the markets were gradually rising, they had been rapidly disposed of. Besides, the importers were afraid to store these early herrings, as, with the experience they had had of strikes and disorganisation of the railway system during the autumn of 1905, they endeavoured to dispose of them at the earliest opportunity. Although the heat for a few days was excessive, the summer, upon the whole, was a short one, which permitted the despatch of the herrings to the interior without risk or damage.

Notwithstanding the high duty per barrel, Libau is a great competitor with Germany in the herring trade; but the freights being higher than to the German ports, the merchants and importers have to be content with smaller profits. One of the importers informed me that last year he sold 60,000 barrels, 90 per cent. of which were Scottish herrings. This year, he expects to sell 70,000. Of several thousand barrels in store he has not a barrel of Crown-branded herrings; they are too high in price for his trade. Last year he bought 300 barrels of Crown-branded matties which, he said, turned out mostly spents. He also complained of heavy salting; consequently he bought none this year. He would like very much that Scottish curers would adopt the quarter-hooped barrel, viz., four, instead of three, wooden hoops on the quarter, with iron hoops on each end. When the barrel gets old the left end hoops, he says, give way, the pickle is lost, and, as they cannot be repaired at once, the contents depreciate in value, but, with an iron hoop on each end, the barrel invariably keeps tight. He also wished to impress upon curers the importance of using good stavewood. I may here mention that three barrels were shown me of early Fraserburgh matties. Two of the barrels were made of very inferior wood, with the result that there was not a drop of pickle on the herrings.

Another importer said that the business in Crown brands is small and does not improve, because they are dear and have too much salt, as against the trade marks, which are done up very well. He imports about 50,000 barrels annually.

Very few, if any, herrings are consigned—nearly all are purchased by agents in Scotland. The cheaper kinds, viz., mat-fulls, matties, spents, and tornbellies, are those in demand.

Complaints were made to me of two parcels of Crown-branded matties being of bad quality and heavy salting, but on inspection I found the herrings quite satisfactory and the salting perfection.

Although Libau supplies many of the Kurland districts, a large business is done with South Russia. While visiting the stores I met two buyers, one a woman from near Moscow, who wished to purchase 600 barrels, the other, a man from Rostow, who wanted 65. In the first case the freight and duty, exclusive of the price of the herrings, was 20s. per barrel, and in the latter, 24s.

For the past two years about 1000 barrels of Iceland-cured herrings have been imported. I understand that a fair businesss could be done in these, but the merchants complain of too much salt, slack filling, and no selection. Besides, the curing and packing is done in the Norwegian fashion, which they do not like.

Stornoway winter-cured herrings are, I learn, preferable to vaar herrings, and, provided they could be delivered at about 22s. per barrel, there would be a good demand for them.

During my visit to Libau I noticed a dozen boats of about 15-feet keel land catches of from two to six crans of "stromling" (small herring). In size they vary from four to seven inches in length—the bulk of which were fully developed with milt and roe. Large quantities of these are caught off Revel and Riga, and are smoked and also preserved. Good catches of "dorsch" (codling) were also brought in by these boats.

I regret to mention that two nights previous to my arrival two large importers of Scottish herrings, partners of the firm of Pinchassowitz & Goldstuck, were shot dead in their office; a brother of the latter was also wounded. The town and country were in a very unsettled state.

General Observations.

In attending the sales, I found that there was no fixed rule as to the number of barrels examined. In a parcel of 60 there might be half-a-dozen barrels opened, while the same number might suffice for a lot of 300. When the article appeared good the inspection to a great extent was superficial, the great test being by taste. In all cases it is essential to have a well-filled barrel. Filling up the barrels with herrings which originally lost the pickle, and with torn or inferior fish, detracts considerably from their appearance. Two or three barrels, badly made up in the head ends, are sufficient to damage a parcel. Besides, one or two bad parcels in a cargo shakes the confidence of the buyers. Too much care cannot be bestowed by curers on the doing-up of their herrings, the ultimate result of which will be to their benefit.

With regard to the stencilling and marking of barrels of unbranded herrings, importers invariably feel annoyed when on examination they find the herrings are inferior to the description given. Buyers of unbranded herrings, when they look for fulls expect to get these. On the ends of the barrels in a parcel of herrings I saw the word "Full" impressed, but on inspection the fish turned out to be indifferent matties. In many instances the selections were not according to what was represented on the ends of the barrels; consequently there was a growing tendency to buy Dutch and German selected herrings instead of unbranded herrings. There is a class of buyer from the interior who cannot see he is getting an inferior bargain by buying a barrel of German-cured herrings—the cask containing which is much smaller than a Scottish-made barrel. The reduction of two marks in the price of the empty cask is to him a great inducement to purchase.

The complaints this season by importers and merchants in the interior were made on the following grounds, viz.:—(1) herrings torn; (2) insufficient cure, the fish, in many cases, throwing off an offensive smell; (3) defective selection, matties being largely mixed with spents, and (4) sunburnt herrings. With regard to the first of these complaints, the early Shetland and East Coast herrings were particularly tender, and, although this was not so much noticed before shipment, the bellies of the herrings, after the fish had lain some little time in store, were practically eaten away. The unkeepable nature of the herrings had undoubtedly to do with this. I do not think any trade markers would stencil barrels containing such herrings with "Splendid Selection," "Large Selected Fulls," or "Fine Selected," if they saw them in the same condition as I did, practically all torn. As to the second complaint, many of the fishcurers, in their endeavour to strike a fine cure, had undersalted their herrings, with the result that, owing to the excessive heat, several parcels that I saw were not only tainted but smelling. One buyer informed me that his loss, on a parcel of trade marks, would amount to several hundred pounds. The result of my visit to several of the stores showed that Scottish curers should pay more attention to their cure and ascertain for themselves, before exporting these early Shetland and East Coast herrings, whether they are really a keepable article or not, otherwise the trade will slowly but surely fall into the hands of other countries. With regard to the selection, the greatest grievance was that the matties contained too many large spents. Apart from unbranded herrings, several of the importers mentioned to me that they were afraid to purchase Crown-branded matties at the close of the season, as they were largely mixed with spents. Respecting sunburnt herrings—one barrel of which, if seen by the buyer, is sufficient to detract from the value of a parcel—I may mention that I saw several parcels, from districts extending from Montrose to Wick, which were more or less damaged by sun-heat. Although unbranded herrings were shown me which were destroyed by sun, it was very disappointing to see sunburnt herrings with the official stamp on the barrels. In a season such as the past it would be well that fishcurers, for their own interest and the interests of all concerned, should use every means to protect, not only the Crown brands, but all herrings cured by them. Besides, in the shipment of herrings, every precaution ought to be taken with regard to deck cargoes. Owing to excessive heat there has been considerable damage, involving the receivers in serious losses.

The demand this season for Scottish herrings in Russia and the interior of Germany has been unusually good. Even those directly concerned with the business were unable to explain the cause of the rapid consumption. The high price of meat in Germany, and scarcity of food stuffs in Russia, all contributed to a better outlet and an advance in price. With regard to the great advance in price, it may be mentioned that for several weeks there had been almost tropical heat, and as the early herrings this season were much fatter than usual, buyers were not inclined to risk forwarding them to Russsia. Only small quantities were sent inland. They were waiting for more keepable herrings, and when the first arrivals of these came in there was a rush which maintained prices during the season. More Crown-branded herrings were this season sent to Russia than usual, because the brand was considered as affording a better guarantee than could be obtained in the case of unbranded herrings, that the fish in the barrels were capable of keeping in good condition, and because a good many of the unbranded herrings, out of earlier arrivals, got spoiled after they had lain for any time in store.

As there has been no extension of railways either throughout Germany or Russia, no fresh markets have been opened up. Some time ago the Russian Government had arranged to deepen the river Vistula, but owing to internal trouble and want of money the work in the meantime has been abandoned. The deepening of the waterway would materially increase the traffic and the consumption of herrings in that direction.

Humbly submitted,

John Skinner,
Assistant Inspector.

The Secretary,
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Edinburgh.

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TWENTY-FIFTH

ANNUAL REPORT

OF THE

FISHERY BOARD FOR SCOTLAND,

Being for the Year 1906.

IN THREE PARTS.

Part I.—GENERAL REPORT.
Part II.—REPORT ON SALMON FISHERIES.
Part III.—SCIENTIFIC INVESTIGATIONS.

PART II.—REPORT ON SALMON FISHERIES

Presented to both Houses of Parliament by Command of His Majesty.

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PRINTED FOR HIS MAJESTY'S STATIONERY OFFICE
By JAMES HEDDERWICK & SONS LIMITED,
At "The Citizen Press," St. Vincent Place.

And to be purchased, either directly or through any Bookseller, from
OLIVER & BOYD, Edinburgh ; or
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TWENTY-FIFTH ANNUAL REPORT.

TO THE RIGHT HONOURABLE

JOHN SINCLAIR, M.P.,

His Majesty's Secretary for Scotland.

Office of the Fishery Board
for Scotland,
Edinburgh, *May*, 1907.

Sir.

In continuation of our Twenty-fifth Annual Report we have the honour to submit—

PART II.—REPORT ON SALMON FISHERIES.

In the absence of actual statistics respecting the numbers and weight of salmon caught during the fishing season of 1906, from lack of statutory authority to obtain them, we have once more to fall back upon the weight of salmon reported to us as having been carried by Scottish Railways and Steamships. We regret to announce that, as compared with season 1905, the weight shows a decline of 531 tons. As compared with the quinquennial average last struck in 1903, a decline of 285 tons is shown. The satisfactory improvement noted in last Report has not been maintained. The total for 1906 is 1749 tons 10 cwts. From the following Table, which shows the weights reported from the four divisions of the coast usually adopted, and perhaps more clearly from the chart of curves also given, it will be seen that the decline has been general in each division.

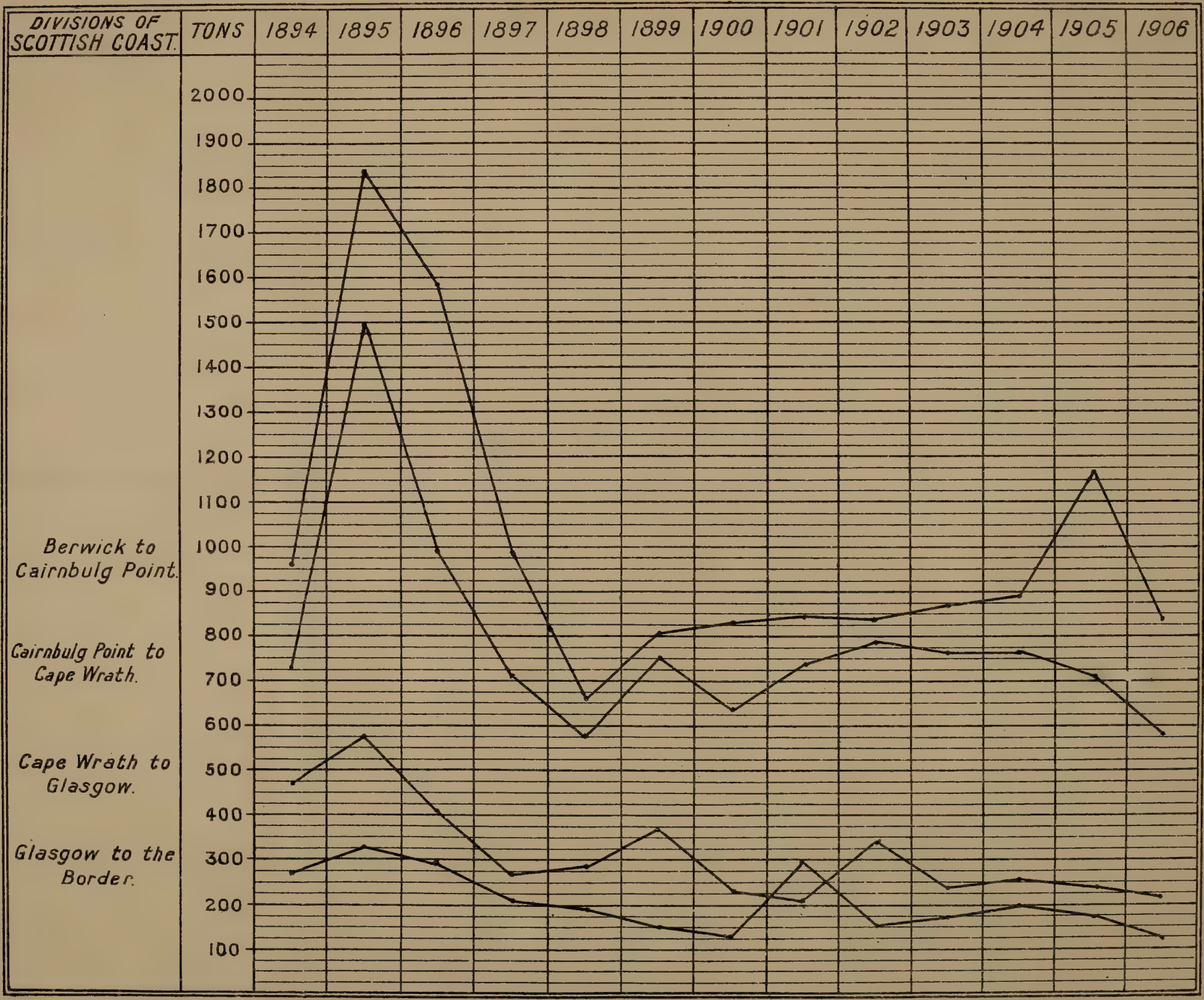
TABLE showing the Weights of Salmon Carried by Scottish Railways and Steamships.

District.	1894—Weight.				1895—Weight.				1896—Weight.				1897—Weight.				1898—Weight.				Average Weight.			
	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.
Berwick to Cairnbulg Point, .	963	8	2	23	1,834	1	3	24	1,583	6	1	26	987	5	1	4	666	8	3	13	1,206	18	1	1
Cairnbulg Point to Cape Wrath,	729	2	2	17	1,492	12	..	7	987	13	1	8	717	4	..	7	577	16	2	20	900	17	3	6
Cape Wrath to Glasgow, . . .	471	13	3	4	576	7	..	10	414	2	3	5	270	15	..	1	283	18	2	1	403	7	1	21
Glasgow to the Border, . . .	273	6	..	..	326	..	1	17	293	3	..	1	219	8	..	21	189	..	..	20	260	3	2	6
Total, . . .	2,437	11	1	16	4,229	1	2	2	3,278	5	2	12	2,194	12	2	5	1,717	4	..	26	2,771	7	..	6

District.	1899—Weight.				1900—Weight.				1901—Weight.				1902—Weight.				1903—Weight.				Average Weight.			
	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.
Berwick to Cairnbulg Point, . .	819	17	2	6	826	17	3	26	845	10	1	3	835	3	2	23	867	18	1	14	839	1	2	9
Cairnbulg Point to Cape Wrath,	753	12	2	..	639	4	..	16	740	18	3	23	786	5	1	17	767	13	2	..	737	10	3	17
Cape Wrath to Glasgow, . . .	365	12	..	3	232	15	1	16	203	8	3	16	332	8	0	8	240	8	..	10	275	..	1	5
Glasgow to the Border, . . .	152	18	1	19	137	14	1	25	296	16	1	21	157	13	3	1	171	9	..	2	183	6	1	19
Total, . . .	2,092	..	2	..	1,836	11	3	27	2,086	14	2	7	2,111	10	5	21	2,047	8	3	26	2,034	19	0	22

District.	1904—Weight.				1905—Weight.				1906—Weight.			
	Tons.	Cwts	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.
Berwick to Cairnbulg Point, . .	881	17	2	27	1,158	1	..	24	834	7	1	22
Cairnbulg Point to Cape Wrath,	768	1	3	23	708	6	..	24	577	0	0	25
Cape Wrath to Glasgow, . .	251	6	..	20	241	13	..	21	214	0	3	9
Glasgow to the Border, . . .	196	4	2	6	172	18	..	12	124	2	0	17
Total, . . .	2,097	10	1	20	2,280	18	2	23	1,749	10	2	17

CURVES SHOWING APPROXIMATELY THE TONS OF SALMON CARRIED BY SCOTTISH RAILWAYS & STEAMSHIPS SINCE 1894.



Reports from District Fishery Boards.

The reports from District Fishery Boards and others received by the Inspector of Salmon Fisheries, and included in Appendix I. to Mr. Calderwood's Report, show that almost in every district in Scotland net fishing, where carried on, has been comparatively unsuccessful, and that in the majority of rivers fishing by means of rod and line has only been moderately successful. A few exceptions to the last statement occur. In the Tay the spring angling was exceptionally good, the autumn angling exceptionally poor. In the Awe, a river which fishes best in low conditions, a record was obtained. Owing to the dryness of the summer the smaller streams suffered, except in cases like the Helmsdale, where the head waters are stored for use at such times. In the main, however, the season 1906 must be regarded as a year of small waters and few fish.

Reduction of Netting in Narrow waters.

With regard to the question of netting, it appears from Mr. Calderwood's Report that the policy of reducing net and coble fishing in narrow waters, recommended by Lord Elgin's Commission on Salmon Fisheries, is gaining favour, and that in several important districts attempts are now being made, through combinations of proprietors of salmon fisheries and others, to improve the stock of fish by the removal of nets formerly fished in waters where ascending salmon congregate, and where, therefore, constant netting results in the removal of an undue number of fish. Experience in Scotland and elsewhere seems more and more to show that the sea coast has to be regarded as the proper situation for the net, where salmon in best possible condition for the market can be captured, and our great commercial salmon fisheries successfully carried on, while the river has to be regarded as the natural breeding place of the fish, where fishing should not be of such a kind as to seriously reduce the stock. Rivers of large volume with wide estuaries can no doubt be netted to an extent which would be extremely harmful to smaller rivers; but in every case a river has to be judged upon its own merits, and the netting so regulated that a proportion of each run of fish is enabled to pass the nets and to ascend to the comparatively safe waters of the upper river. Details of existing net and coble fisheries, so as to show the extent thereof, are given in Appendix III.

Lapsed District Boards.

The District Fishery Boards in the Island of Mull have unfortunately been allowed to lapse. A proposal that the three districts in the island—viz., Lussa, Pennygown, and Baa—should be amalgamated could not be carried out because of the non-existence of the District Boards. The grouping of the smaller districts of the West Highlands has repeatedly been recommended as likely to lead to better supervision and control.

Rentals of Districts.

With regard to the rentals of the principal districts, the following brief statement is sufficient to show that the high standard previously referred to has been well maintained:—

YEAR.	Tweed.	Tay.	N. Esk.	Dee.	Spey.
	£	£	£	£	£
1900, . . .	...	22,548	6,510	18,989	...
1901, . . .	...	22,558	6,466	19,418	8,608
1902, . . .	...	22,663	6,494	19,455	8,146
1903, . . .	15,338	22,648	6,494	18,393	8,147
1904, . . .	15,439	23,099	6,494	19,078	7,396
1905, . . .	15,499	22,675	6,489	19,332	8,364
1906, . . .	15,499	22,838	6,485	19,068	8,740

The assessable rentals of the East Coast Districts, exclusive of the Beauly and the Wick, and including a sum for the East of Sutherland Districts which does not express the full value owing to the difficulty of separating angling from other sporting values, was in 1906 equal to £107,507. For comparsion with recent annual totals, covering the same divisions of the county, the following is given :—

East Coast Rentals.

1903	1904	1905	1906
£	£	£	£
104,815	106,691	107,771	107,507

Boxes of Salmon sent to Billingsgate.

The decrease in the number of boxes sent to Billingsgate continues. This decrease is, however, primarily caused by the growing practice of sending Scottish salmon to markets other than Billingsgate. In 1906 only 12,282 boxes of salmon were marketed in Billingsgate, showing a decline on the total for 1905 of 2086 boxes. Totals are given in the following Table :—

	Total No. of Boxes.
Average for 10 Years—1884-1893, - -	23 ,749
Average for 10 Years—1894-1903, - -	17,160
Total for Year 1904, - - - . -	14,753
Total for Year 1905, ...	14,368
Total for Year 1906, ...	12,282

The detailed Table, kindly furnished by the Fishmongers' Company, showing the supplies from all sources, and the average monthly prices, here follows, from which it will be noticed that, in spite of the decrease of supplies above referred to, the number of salmon sent to London from Scotland still very largely exceeds the number sent from any other source:—

SALMON

Delivered at BILLINGSGATE during the year 1906, and average MONTHLY price per lb.

Month.	BOXES.									PRICES.							
	English.	Scotch.	Irish.	French.	Norway.	Danish.	Dutch.	Canadian.	Total.	English.	Scotch.	Irish.	French.	Norway.	Danish.	Dutch.	Canadian.
										s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
January,	..	..	25	10	..	..	75	22	132	..	..	3 10½	2 9	..	..	3 3¾	0 8¾
February,	96	250	344	6	..	..	16	13	725	2 1	2 3	2 3¼	1 9	..	..	2 2¼	0 8
March,	266	611	686	..	..	..	51	30	1,644	2 3½	2 4	2 2¾	..	..	..	2 3	0 7½
April,	190	916	646	..	..	..	25	37	1,814	2 2	2 2½	2 1¼	..	..	..	2 1½	0 7¼
May,	445	1,269	667	..	58	5	58	25	2,527	2 1	2 0¾	1 11½	..	1 10¾	1 10¾	2 1	0 8½
June,	568	2,482	2,460	..	1,271	..		63	6,851	1 6¼	1 7½	1 6	..	1 4	1 4	1 7¾	0 8
July,	283	4,112	2,125	..	469	..	..	313	7,302	1 3¼	1 4½	1 2¾	..	1 2½	1 2½	..	0 7½
August,	455	2,231	146	..	7	..	..	212	3,051	1 5½	1 7	1 4	..	..	..	..	0 8
September,	250	411	1	..	..	..	3	88	753	2 0½	2 2	..	..	..	..	..	0 8½
October,	7	..	..	..	..	..	4	28	39	3 1	..	..	..	..	..	..	0 9
November,	..	..	..	..	..	..	25	30	55	..	..	..	..	..	..	3 2½	0 9
December,	..	..	..	..	..	..	63	38	101	..	..	..	..	..	..	4 3¼	0 8
Total,	2,560	12,282	7,100	16	1,805	5	327	899	24,994	..	..	..	..	..	..	..	..

Inspections in 1906.

The inspections made by Mr. Calderwood in 1906 were in the Districts of the Tay, Deveron, Helmsdale, Thurso, Forss, Hope, Inchard, Broom, and Awe. Mr. Calderwood also inspected several oyster and mussel fisheries.

Scales of Salmon.

A continuation of the study of the salmon's scale has been made by Mr. H. W. Johnston, who contributes a paper on the subject in Appendix II. This paper deals with the scale in the early stages of growth. Of the large number of smolts marked in the Tay in 1905, several grilse were recaptured in the summer of 1906, and in the spring of this year some of the same number of fish have been recaptured on their first ascent of fresh water from the sea. They are now small spring salmon of 8-10lb. weight. Mr. Johnston's paper deals with the scales of these fishes, and is of great value in confirming the view that, in great measure, the life-history of the salmon may be read from its scales.

Remaining Appendices—viz., VI., VII., and VIII.—give respectively the Rateable Values of Scottish Salmon Fisheries, the Annual Close Times at present in force, and a list showing the Chairman and Clerk or Clerks of each District Fishery Board.

Marking of Salmon.

The investigations into the Life-History of the Salmon, carried on by means of marking fish, have been continued during 1906, and thirty-five recaptures secured. The results are dealt with by Mr. Calderwood in Appendix IV.

Sea Lice Experiment.

An experiment was conducted at the Bay of Nigg Laboratory in order to study the conditions under which salmon pass from sea to fresh water, and more especially to test the length of time during which the sea lice remained attached to ascending fish. This matter is dealt with in Appendix V.

We have the honour to be,

SIR,

Your most obedient Servants,

ANGUS SUTHERLAND, *Chairman.*
D. CRAWFORD, *Deputy-Chairman.*
D'ARCY W. THOMPSON.
W. R. DUGUID.
L. MILLOY.
D. MEARNS.
H. WATSON.

WM. C. ROBERTSON, *Secretary.*

SALMON FISHERIES.

TWENTY-FIFTH ANNUAL REPORT

OF

THE INSPECTOR OF SALMON FISHERIES FOR SCOTLAND.

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MR. CALDERWOOD'S REPORT.

Fishery Board for Scotland,
February 1907.

I have the honour to submit my report for the year 1906.

Reduction of Netting in Narrow Waters.

The extensive coast salmon fisheries in Scotland may be regarded as the reliable source of the supply of fish in best possible condition for the market. To increase and maintain our stock of salmon the sound policy of reducing netting in rivers and narrow tidal waters, where fish congregate before ascending to their natural spawning grounds, is becoming more widely known and more commonly put in practice.

Other factors than overnetting, such as pollutions and the construction of weirs or dam dykes, have, no doubt, in certain localities, reduced and even entirely prevented the ascent of salmon. The pollutions of the Clyde, for instance—now happily being steadily reduced by the sewage works of Glasgow—put an end to the regular appearance of salmon in that river about the year 1850. The fisheries of the Leven, in like manner, were seriously affected by the rise of the Vale of Leven Bleaching and Turkey Red industries; and more recently the sudden influx of polluted pit-water to the Girvan, annihilated fish in that river for a considerable time.

Such dangers are, however, confined to definite localities and have to be dealt with by means other than those directly concerned in the regulation of the actual fisheries. The great majority of our Scottish rivers are happily not seriously polluted, but the experience of various methods of netting has abundantly shown that in not a few cases the steady practice of net and coble fishing—river and estuary seine-netting—has been responsible for the decline of the stock of fish. Our knowledge of the life-history of the salmon, added to during recent years by the marking of fish and study of their scales, &c., shows that very many salmon do not spawn annually, that there are always more salmon in the sea than in our rivers, and that the salmon which enter our rivers are the somewhat limited company upon which we are entirely dependent for the upkeep of the stock. If, then, we persistently remove, season after season, those breeding fish, we are, in spite of close times, following a most dangerous policy. It is, of course, clear that different rivers are certain to be differently affected by the same amount of netting; that the large river with the wide estuary can stand an amount of netting which would speedily ruin the small river with the confined mouth. Each river must be treated on its own merits. But in every case the netting should be so limited as to allow a proportion of every run of fish to pass into the comparatively safe haven of the upper river. Only in this way can a river be supplied with stock from both early and late running fish and have its full extent of available spawning ground occupied. Lord Elgin's Commission on Salmon Fisheries reported on this matter as follows:—

"We are disposed to hold that on every river, and in every "salmon district, there is a point above which the habitual use of a "net becomes injurious to the fisheries of the river. We hesitate "to state a dividing line which could be applied universally. It "has been suggested by the Commissioners on the Tweed, and by a "number of witnesses, that all nets above the tideway should be "removed. . . . But the flow of the tide would not be satis-"factory as a universal rule. . . . We think that justice will "best be done if means are provided for determining the proper "limits in each case after an inquiry on the spot. . . . If the "same facilities for netting are permitted in the narrow waters of "the river as on the sea-coast, it becomes impossible to ensure a "fair distribution of fish in all parts of the river. . . . In "advising a restriction of netting in narrow waters we may point "out that we are again in accord with the Royal Commission on "the Tweed. We have also no inconsiderable amount of support "from actual experience. . , . In the second place, there is "the case of the Aberdeenshire Dee, which is of great importance, "both because it is an experiment which has been carried on for a "number of years—the removal of nets began in 1872—and also "because it has been made under conditions prevailing generally in "this country. . . . But we may sum up here by stating that "as a result of the operations of this voluntary association all the "nets have been removed from the river to within three miles of "the mouth, and this policy has been followed by an increase of the "value of the fishings from £7000 to close upon £19,000. Moreover, "the increase has been shared by all, as the tacksmen themselves "are the first to admit, the coast fishings having increased from "£6000 to £8050, and the river fishings from £1250 to close on "£11,000. These sums, no doubt, do not represent correlative "numbers of fish, sporting rentals being measured by other con-"siderations, but it cannot be denied that all parties have greatly "benefited." Having thus given expression to the belief in the policy, the Report goes on to follow up the matter by suggestions of a practical kind. "We are of opinion that the work done by "voluntary effort is sufficient to establish the fact that means "should be available for the removal of nets in narrow waters. "But, if so, it is impossible to leave the matter entirely to voluntary "associations. We think that, the point where netting becomes "injurious having been determined in the manner already detailed, "the Local Fishery Boards should be empowered to acquire the

" nets above that point compulsorily. Compulsion is necessary, " because to omit even one net might ruin the whole scheme ; it " being demonstrable that any restrictions lower down the river " would simply transfer a large number of fish to the station " higher up which was allowed to remain."

No legislation has as yet given District Fishery Boards power to deal with this question of reduction of netting, but in several districts voluntary associations have been formed for the special purpose of ascertaining how far the result may be attained by agreement. In this way the angling tenants of the Helmsdale have removed all nets in their district ; the Loch Ness Angling Improvement Association have removed, under lease, all nets from the river Ness ; a material reduction of netting has been effected in the Spey. The Kyle of Sutherland nets, which I inspected in 1904 and reported upon, have been in great part removed. This action has long been looked forward to, but has now been brought into operation by the formation of a Syndicate composed of local proprietors of salmon fisheries and certain of the angling tenants. The lease of the Balnagown Net Fishings at Bonar Bridge does not expire till 1916, but a break occurs at the close of the season of 1911. The Invercharron Net Fishings are leased till 1910. The Skibo Net Fishings are unlet. It has now, I am able to report, been agreed to take over those fishings—which comprise the whole nettings of the Kyle—and, by means of a Committee of the Syndicate, to carry on the fisheries in a reduced and regulated manner for the next five seasons, by which time the break in the Balnagown lease will be capable of being utilised. No netting is to be carried on above Bonar Bridge, and the Balnagown and Skibo nets are alone to be fished during April and May. In addition to this, 24 hours extra weekly close time is to be allowed, the nets being off from 6 p.m. on Saturday till 6 a.m. on Tuesday. The present tenant of the Invercharron Fishings is to act as manager for the Syndicate. Mr. Macaulay, Golspie, who has carried through the negotiations, has kindly furnished me with a memorandum prepared in January of this year (1907) setting forth in some detail the relative conditions and obligations undertaken. In this the definite purpose of the Syndicate is stated as being " to improve " the angling " on the rivers by allowing up an increased number of fish, " and at the same time to make sufficient out of the nets to " meet or nearly meet the rents and expenses." It may be felt by some that the primary object, viz., to improve the angling, is at first sight a benefit so limited in its application as to be open to serious criticism. I have no hesitation in saying, however, that it is this very improvement of salmon angling and the increase in the desire for this form of sport which is the safeguard of the best economic interests of our salmon fisheries, since it secures as an inevitable accompaniment an adequate stock of breeding fish in our rivers. I consider, therefore, that, in the absence as yet of legislation on the lines of the Lord Elgin Commission Report, giving power to District Fishery Boards to acquire, compulsorily if need be, net fishings in narrow waters, it is a most fortunate

Kyle of Sutherland.

circumstance that private sporting interests should combine to secure the end aimed at in the Commission's recommendation.

Deveron.

In my last report I referred at considerable length to the Deveron, and pointed out that, in my opinion, the two reasons for the backward condition of the river's fisheries were the unusually obstructive bar at the mouth, and the netting. The bar not only prevented the easy ascent of salmon but materially reduced the influence of the fresh water upon the sea in the bay, a great amount of percolation through the extensive gravel bar taking place, and the concentrated flow of the river being seriously reduced. On 13th June I again visited the river mouth, and on this occasion found that the lagoon behind the bar no longer formed a part of the river channel to the sea, and that the current now flowed in a direct line from Banff Bridge into the sea, thus affecting a marked improvement. A storm having injured the retaining wall of Low Shore Street in Banff, the Town Council had, at trifling cost, dug a direct mouth for the river so as to affect repairs. Already, by the constant action of the sea, the old river mouth was completely closed up. The lagoon behind the bar was also in great part filled in, and the general appearance of the river mouth was completely altered. The intention of the Town Council originally was to reopen the old mouth, but owing to prospective changes in the ownership of the netting rights in the neighbourhood and an altered policy in regulating the same, the artificially-cut mouth has been allowed to remain. In spite of several winter storms, the new mouth retains its position at the time of writing. If, as suggested in my last year's report, it is not found possible to permanently establish the mouth by the erection of some suitable breakwater, I am of opinion that the District Fishery Board, or the heritors, would do well to counteract at intervals the silting action and to maintain the direct run into the sea.

With regard to the question of the removal and regulation of the netting in the district, I may state that through last summer negotiations have been in progress with the object of securing to the proprietors a complete control. In my visit to the district in June, I had the opportunity of meeting with the various proprietors interested and of discussing the merits of this question.

I am now able to report that early this year negotiations were successfully completed by which all netting in the river and in Banff Bay, inside a line between the towns of Banff and Macduff, will be suspended in future. The proprietors who have combined with the object of securing a better stock of salmon in the district have bought all the netting rights in the locality referred to. They have then sold the sea fishings outside of the line mentioned, and are to convey the river fishings to their original owner with the condition attached that rod and line fishing will alone be employed. During the present fishing season netting will continue as formerly, but from 27th August onwards the river and the Bay of Banff will be free of nets. With the complete purchase of these nets the prospect of an increased stock of fish is certain. The increase will not appear at once in the form of a great multiplication of salmon, for the breeding stock is at present much reduced, and recovery of a full breeding stock takes years, but in 1908 an increase equal at least to the number of fish previously taken by nets should be secured, and from those fish the first returns should begin to appear in 1912. As a trouting river the Deveron is famous, but fears need not be entertained by trout fishers that the increase of salmon will injure the trout stock. The excellent feeding grounds of trout will be shared by the salmon par no doubt, but there is no reasonable argument of which I am aware to show that the presence of salmon is detrimental to trout. All proprietors of salmon fishing in the Deveron will in time be beneficiaries by the action of those who have successfully carried through the purchase of the nets, and it is to be hoped that all will assist in furthering the general interests of the district. In the Dee, in spite of the material increase in value to all heritors, complaint has occasionally been heard that the financial burden is not fully and equitably distributed owing to one or two declining to bear their shares, and it has been urged, with reason, that in an operation which results in benefit to all, contributions *pro rata* should reasonably be expected. As I have already stated, the recommendations of Lord Elgin's Commission embody the suggestion that in future District Fishery Boards should have powers to assess in this manner.

Tay. In the case of the Tay a very considerable reduction of netting has already been brought about, first, by the agreement of proprietors to desist from netting above the Linn of Campsie, and, second, by the operations of the Tay Salmon Fisheries Company in gaining control of almost all the lower water available for netting. In those lower waters they do not fish so much as when competition between various tacksmen obtained. In addition to this, the Company cease netting between the Linn of Campsie and the Bridge of Perth, *i.e.*, in all purely fresh water, on 31st May each year, and before 31st May they allow a weekly close time of 60 hours.

Awe. In the Awe, while six nets are still at work, one in the river at the mouth and the others in Loch Etive at short distances from the river mouth, an agreement has been come to by which netting is confined to twelve hours during the day—10 a.m. to 10 p.m. A 40-hours' weekly close time is, in addition, allowed from 6 p.m. on Saturday to 10 a.m. on Monday.

South Esk. In the South Esk all river nets were removed some years ago, and last year this arrangement was continued for another period. No netting is now carried on above Rossie Mill, in Montrose Basin, two miles below the actual mouth of the river. Much injury to the stock of fish has, however, been caused in the upper waters by the use of dynamite in the hands of unscrupulous persons.

Annan and Ayr. In the Annan and the Ayr all sweep nets have been entirely removed from the rivers.

Girvan and Doon. In the case of the Girvan and of the Doon the question of removing not only the river nets but the sea nets (fixed engines) has been under consideration by the proprietors. I referred in my last annual report to the peculiar conditions of the estuary of the Doon in relation to the neighbouring bag nets, pointing out that while the actual mouth of the river is slowly shifting northwards no provision exists for a corresponding adjustment of the estuary, the result being that the bag nets on the north side are now considerably nearer the river mouth than formerly. Since my last inspection of the district I have been in correspondence with the Clerk to the Board in connection with the proposals to remove river and sea nets in order to improve the stock of fish. The Marquis of Ailsa's sweep nets at the mouth of the river have for some years been unfished, but inasmuch as a certain amount of netting of spring fish in the upper water continues, it has, I understand, been impossible to come to an agreement locally for the satisfactory carrying out of the policy recommended. This, therefore, is an instance of the need for compulsion included in the recommendations of the Royal Commission to which reference has already been made.

Spey. As reported on a previous occasion, the nets on the Spey are now confined to the three lowest miles of the river instead of eight miles as formerly. This is sufficient at most times to secure the operation of the weekly close time.

Ness. All netting has, for a period of four years, been removed from the river Ness since the commencement of fishing season 1905.

In thus describing what has been accomplished in removing nets from situations where injury is done to the breeding stock of our rivers, I have, at the same time, made an estimate of the net and coble fishing which remains.

PRESENT EXTENT OF NET AND COBLE FISHING IN SCOTLAND.

Two important districts are still conspicuous for the great extent of netting carried on in fresh and tidal waters. I refer to the Tweed and the Forth. The former does not officially come under the superintendence of the Fishery Board for Scotland, but from a report with which the Clerk to the Tweed Commissioners has favoured me it appears that no change has in recent years taken place and that sixteen miles of river from Berwick to Coldstream are still regularly netted. I am informed that the number of stations fished is 39 and that 62 nets are in use. I incline to think that so long a belt of nets is more than sufficient to defeat the purpose of any reasonable weekly close time.

Tweed

Forth. In the Forth, sweep netting is carried on in the long tidal portion of the river from Alloa to Craigforth, about 2½ miles above Stirling, a distance in all of 16 miles. The district of the river Forth is peculiar in this that it contains within its borders a large arm of the sea, the Firth of Forth, in addition to an estuary as extensive as that of the largest Scottish river, the Tay. From Fife Ness on the north, the district extends to the county boundary between Berwick and Haddington on the south. The counties of Fife, Kinross, Linlithgow, Edinburgh, and Haddington may be said to be without salmon rivers. No other district has such a large proportion of sea-coast and estuary, and, in spite of the fact that the rivers Forth and Teith are of considerable volume, no other district has a smaller proportion of fresh-water mileage. The influence of the tide extends upwards above Stirling to Craigforth, where the chief amount of net and coble fishing is carried on, there being 30 available fishing stations. The Craigforth cruive, concerning which I made special report some years ago, is now disused, but the cruive dyke is still allowed to remain. It is in part a natural barrier of rock and in part an artificial superstructure.

The cruive dyke practically determines the limits of tide reach, and also acts as a check upon ascending salmon. From this point down to Alloa 37 shots are regularly fished at the height of the season. Considerable variation seems to exist, however, as to the particular hauling grounds used. In the whole stretch of water there are 63 hauling grounds available. Above Craigforth three stations are fished at the junction of the Teith and Forth, and a few shots are also annually taken in the Campbell Pool (river Teith) at Callander. In addition to all this netting, I understand that a considerable amount of fishing for salmon is carried on in the estuary below Alloa.

The assessable rental for salmon fishing in the Forth district is now only £3274.

Tay.

In the Tay, netting is now all below the Linn of Campsie, but the most constant and important section of the water fished is below Perth. The limitations placed upon the netting above Perth have already been referred to. In a river of such large volume, and possessed of such a large and wide tidal estuary—extending, as it does, with a marine character from Newburgh to Buddon Ness beyond Broughty Ferry, a distance of 20 miles—a considerable amount of netting is possible without interference with the adequate stock of salmon. While, therefore, the number of fishing stations regularly fished amounts to forty in a total distance of thirty-three miles, it has to be remembered that the Tay netting cannot be placed in the same category as the Tweed netting, where the entire stretch of water so fished is confined to the river; nor can it be compared even with the netting of the Forth, where, although the water fished is tidal, it is, nevertheless, confined in a comparatively narrow river channel where netting has much more complete effect, besides which the natural spawning ground of the Forth is in no way comparable to the great extent of the Tay, and the stock of fish very much less.

North Esk.

So far as I have been informed, there is little or no change in the amount of netting carried on in the North Esk river. There is no natural estuary, and the river is not of great volume, although it attracts great quantities of fish. Netting is carried on from the river mouth to Marychurch Bridge, a distance of nearly five miles. In this stretch there are, moreover, two dam dykes, the upper of which has long been complained against as a serious obstacle to the ascent of fish, but which the lower proprietors of salmon fishings have so far declined to modify.

Dee to Findhorn.

A limited amount of netting is carried on in the Dee, Don, and Ythan. The Deveron is netted for three miles, as is the Spey. In the Findhorn three miles of river are also fished and two miles in the estuary. Sixteen shots are regularly worked, which, in a river of the Findhorn's characteristics, must be regarded as fairly severe. Fortunately, the famous Sluie Pool is no longer netted.

Conan.

The Conan continues to be severely fished. Twenty-seven shots are regularly worked in 3¼ miles of water, and at the top of this is the cruive dyke, with its two fishing boxes. I made special reference to this cruive dyke and its effects upon the local fisheries in my annual report for the year 1904 (*Twenty-third Annual Report*, Part II., p. 11).

No other river on the east nor river of the north or west coasts seems to call for special mention here. The limited amount of netting which is carried on in several rivers of those coasts is detailed in Appendix III., where a table showing the extent of the whole net and coble fishing in the rivers of Scotland at the present time is given.

Cree and Nith.

In the Solway, however, two rivers still considerably netted may be referred to, viz., the Cree and the Nith. The former has a long, winding stretch of tidal water, and the whole of this—amounting to about seven miles—is netted. The banks are uniformly muddy, and no very precise fishing stations are adopted in many reaches. I am informed, however, that 18 shots are regularly worked. This is certainly a severe amount of netting for so small a river. In the Nith the sweep netting is, for the most part, confined to the tidal water below the weir at Dumfries. An occasional shot is taken above this weir and at the mouth of and a short distance up the Cluden tributary. The weir acts as a check to the ascent of fish, and the river below Dumfries is somewhat seriously polluted, although this, in so far as domestic sewage is concerned, is now much improved. Nine shots may be said to be regularly worked in seven miles of tidal river, and five shots occasionally worked. Whammelling by a few crews of Annan-Waterfoot fishermen has recently been practised at the mouth of the Nith. The operations have, however, now been discontinued, the necessary permission having been withdrawn. The Haaf net, peculiar to certain rivers of the Solway, is also fished in the Nith. The Solway Dee is peculiar in this that while only about three shots are commonly worked by net and coble in tidal waters, seven yair nets and the shoulder net at the doaches of Tongueland are also fished.

Taking the details given in Appendix III.—in which are omitted the localities where only an occasional cast of the net is taken, either to preserve a right or on special occasions "for the house"—it is found that in 29 rivers where net and coble fishing is still regularly practised 293 shots may be said to be annually fished in rivers and estuaries. The estimated aggregate mileage of water so fished is 115, the Tweed, Forth, and Tay representing 65 miles.

HELMSDALE ARTIFICIAL FLOODS.

On visiting the Helmsdale in June, when most rivers had run off to a low water-level, I was fortunate enough to witness one of the artificial floods which have, since the impounding of water in Badenloch, operated so successfully in this river. Owing to the lowness of water-level it had become difficult for fish to ascend, while, at the same time, the fish present in the various pools had ceased to rise freely to the fly. A rise in the river was therefore decided upon, and one of the two flood-gates of the Badenloch dam dyke (which structure was described and figured in my report for 1904) was opened its full extent, *i.e.*, 4 feet 3 inches. The rise in the upper waters was immediate and most marked, while at a distance of seven miles down stream, below the junction of the Strath Beg section of the river, the rise in water-level amounted to 5 inches. This rise was allowed to continue for 21 hours, during which time fish could move freely to higher pools, the water being in beautiful "running order." On visiting Badenloch, which, under the new conditions, covers about six square miles, I found that in the 21 hours the water-level had been reduced only 3 inches. Ample water remained for subsequent floods which might be required during the remainder of the summer.

Forss.

This Caithness river might be greatly improved. The two noticeable requirements are a readjustment of the estuary limits—which cannot under existing legislation be accomplished—and the opening up of the fall which occurs at Forss House, about a mile from the sea. The rocky creek, Crosskirk Bay, which forms the estuary, is sufficiently narrow at its seaward opening to admit of bag nets being run out from either side so that fish could be seriously debarred from entering. Difficulties have also arisen in the past as to the proper line of demarkation between the Crown fishings on the west and the Forss Trustees' fishings on the east side. This matter has now been settled, and the boundary laid off by Mr. Carter, C.E., Edinburgh, iron posts having been erected for the guidance of the tacksmen. This boundary-line and the arrangement of the bag nets I inspected. In my opinion, however, it is necessary, in order that the Forss may adequately contribute to the stock of salmon in the neighbourhood, that the limits of the estuary be extended so as to introduce a greater amount of sea room between the extremities of the outrigged and converging bag nets.

The fall on the river is so serious that late-running spawners are not at all likely to surmount it. A limited amount of spawning ground exists in the mile of water below the fall, while the excellent extent of water above is largely unused. Spring fish enter the river, but are, of course, only found below the fall. Grilse manage to ascend in summer by following a zig-zag course up the ledges of rock when the water-flow is not too heavy. This zig-zag course might without great difficulty be simplified and extended into the left bank by blasting so as to give a very much easier gradient. The establishment of a District Fishery Board, who would open up this fall and thus enable more spawning fish to ascend, would, in my opinion, do much for the improvement of the present declining stock of fish, and render this river of much greater value.

The remainder of my tour of inspection included visits to the small districts in the north and west of Sutherland and west of Ross-shire as far south as the Broom. Reports go to show that in almost all the small districts of the north-west Highlands salmon fisheries are in a somewhat backward condition. The bag nets have in most districts done very badly. Several bag-net stations in the island of Skye and the neighbourhood have been abandoned as unproductive, rents are depressed, and angling is in several rivers of comparatively little value. Such combinations of circumstances are not merely the result of weather conditions or of any transitory cause. I hope to be able to give special attention to these smaller west Highland districts this year.

W. L. CALDERWOOD.

APPENDIX I.

REPORTS FROM DISTRICT FISHERY BOARDS.

Reports from 35 District Clerks, referring to 49 districts, are here included. I have again no report from the Nith District. The report from the newly-formed Board for the Bladenoch District has not yet been received. In the Districts of Gruinard, Broom, and Little Broom information suitable for making report is not collected. Gamekeepers and others are, however, sworn in as bailiffs for the protection of the fisheries. Concerning the Torridon District, I have received a letter from Duncan Darroch, Esq., of Torridon, who has previously reported, to the effect that the angling season in that district has now practically ceased to yield any salmon, blaming the local bag nets for this, and explaining that "it is really no use trying to fill up the schedule."

W. L. Calderwood.

REPORT FROM RIVER TWEED DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, below the average.
   - (*b*) By sweep net in tidal or fresh waters, below the average.
   - (*c*) By rod and line, about the average.
2. The actual number of fish caught has been as follows :—
   - (*a*) By fixed engine, approximately, 6876.
   - (*b*) By sweep net, actual, 34,882.
   - (*c*) By rod and line, approximately, 3566.

   Note.—A very large number of fish are captured by rod and line in the open waters in Peeblesshire, of which it is impossible to give an estimate. A good many are also caught in the open waters in Teviot and its tributaries.
3. Expressed as percentages for each month of the season, so as to show the times of greatest run, the figures are :—

	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.
By Fixed Engine, . .	–	–	–	–	14·5	30·0	40·0	15·5 (14 days)	–	–
By Sweep Net, . . .	2·6	3·6	4·3	6·6	15·8	30·4	24·3	12·4 (14 days)	–	–
By Rod and Line, . .	4·77	3·36	3·37	2·87	3·52	0·97	1·74	3·04	23·24	53·12

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows :—The first grilse caught by net was on 19th April. The first grilse caught by rod and line was on 1st June. The greatest number of sea trout and grilse were caught—by net—in July, and in October and November by rod and line.

4. The weight of the heaviest salmon taken during the season was 44½ lbs. The particulars of time and place of capture are :—Caught at Goswick on 17th August.

Protection—

1. The assessable rental for 1905-06 was £15,499 15s. 5d.
2. The assessment levied was £3099 18s. 5d.
3. The water bailiffs employed are — 9 in July and August, 18 in September, 43 in October, 54 in November and December, 48 in January, 28 in February, 20 in March, 15 in April and May, and 9 in June ; and 1 engineer during the whole year.
4. Particulars as to prosecutions instituted are briefly as follows :—Prosecutions were instituted against 206 persons during season 1905-06. 86 persons paid fines or were allowed time to pay, 86 were imprisoned, 12 absconded, and proceedings were withdrawn in the case of 22 persons. The principal offences were killing salmon by means of illegal nets, cleek and light, and rakehooks ; being in illegal possession of salmon and engines for killing salmon, and assaulting and obstructing bailiffs.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—None.
2. With regard to the observance of bye-laws :—Duly enforced and carried out.
3. Fish passes built or in prospect :—None.
4. Natural obstructions not yet dealt with :—None.

Pollutions—

1. The existing pollutions are :—Poisonous matters from mills and dye-houses in Selkirk, Peebles, Innerleithen, Walkerburn, Galashiels, Hawick, Jedburgh, and Chirnside ; household sewage from Biggar, West Linton, Eddleston, Melrose, St. Boswells, Kelso, Coldstream, Sprouston, Ancrum, Lilliesleaf, Earlston, Lauder, &c.
1. Remedial measures :—There are settling tanks connected with all the mills in Peeblesshire which intercept the grosser parts of the mill effluent, but not much good. There are purification works connected with the mills in Galashiels and Selkirk, but those in Galashiels do not appear to be of any use, judging from the appearance of the water flowing from them. In Hawick there are irrigating tanks in a field, but they are not worked satisfactorily. Improved purifying machinery has been erected at Chirnside Mills lately, with the result that a marked improvement is now observed in the state of the river Whitadder.

The Salmon Disease—

1. Disease made its appearance during season 1905-06 in the month of October, and reached its height in January. The river was free of diseased fish in June.
2. The number of diseased fish taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	1047	364
Clean, ...	41	48

The Spawning Season—

1. Fish were first noticed spawning on 24th October (sea trout).
2. The greatest number spawned in December and January.
3. Spawning ceased end of February.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as fair.

Smolts—

1. Smolts were noticed to be migrating seawards in March, April, May, and June.
2. As a smolt year 1906 was good.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 376,000.
2. In securing ova the numbers of male and female fish captured were respectively 23 and 53.

REPORT FROM FORTH DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, below the average.
   - (*b*) By sweep net in tidal or fresh waters, below the average.
   - (*c*) By rod and line, below the average.

   Particulars as to the times grilse and sea trout appeared are as follows :—Grilse, June, July, and August ; sea trout all the season through, but appeared more plentiful in July.
2. The weight of the heaviest salmon taken during the season was 42 lbs.
   The particulars of time and place of capture are :—By fixed nets on the Fife sea coast at Kincraig Fishing Station.

Protection—

1. The assessable rental for 1905-06 was £3274 7s. 11d.
2. The assessment levied was £573 0s. 5d.=3s. 6d. per £. on rental.
3. The water bailiffs employed are 11 in number, including superintendent.
4. Particulars as to prosecutions instituted are briefly as follows :—There were four contraventions of the Salmon Fishery Acts for 1906, implicating 5 men. All the cases went to trial, and convictions followed. The cases consisted of taking and being in possession of salmon smolts, fishing with salmon roe, attempting to take salmon during the annual close time by means of a drift net, and cleeking salmon during the annual close time. We have got ten men interdicted from fishing with the drift or hang net, and four in for a breach of interdict.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—One new dam dyke on the Auchentroig Burn, a tributary of the river Forth, which enters the Forth below Gartmore.
2. With regard to the observance of bye-laws :—Not observed in regard to the placing of hecks at the inlet and outlet of mill lades.
3. Fish passes built or in prospect :—One fish pass built and two in prospect, viz., new fish pass at Loch Vennacher, finished ; in prospect, new fish pass on the Airthrey dam dyke, and a new fish pass on the new dyke on the Auchentroig Burn.
4. Natural obstructions not yet dealt with are :—One—Kippenross old cruive.

Pollutions—

1. The existing pollutions are :—Sewage from Stirling and the different towns below Stirling, and which is in no way purified before entering the Forth; chemicals from coal pits, from paper works, and distilleries.

The Salmon Disease—

1. Disease made its appearance this year in the month of October, and reached its height in January 1906.
   The river was free of diseased fish about the end of February.

2. The number of diseased fish taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	265	90 and 24 Trout.
Clean or unspawned, . .	——	——

The Spawning Season—

1. Fish were first noticed spawning in November.
2. The greatest number spawned in December.
3. Spawning ceased end of January, 1905.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as a good one.

Smolts—

1. Smolts were noticed to be migrating seawards in April, May, and June.
2. As a smolt year 1906 was about the average.

REPORT FROM TAY DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, about the average.
   - (*b*) By sweep net in tidal or fresh waters, below the average.
   - (*c*) By rod and line, the spring fishing was exceptionally good, while the autumn fishing was exceedingly poor through lack of flood.

   The best run of salmon was in July.
   A few sea trout were got at start of fishing on 5th February, and grilse at end of May.
2. The weight of the heaviest salmon taken during the season was 51½ lbs.
   The particulars of time and place of capture are :—At Dupplin on Earn, caught by rod and line on 26th October by Lord Wolverton.

Protection—

1. The assessable rental for 1906 was £22,838 12s.
2. The assessment levied was £1598 14s. 2d., being at the rate of 7 per cent.
3. The water bailiffs employed are 24 in number in close season and from 5 to 8 in open season. Of these, 7 are in the pay of the Tay Salmon Fisheries Co., Ltd., in close season and 2 in the open season. The company also give the assistance of other men when required.

4. Particulars as to prosecutions instituted are briefly as follows :—Since last report 33 cases have been tried in the Sheirff Court (29 in Perth, 2 in Cupar-Fife, and 2 in Forfar), involving 46 persons. The offences consisted of—cleeking, 4 ; possession of foul fish, 4 ; possession in close time, 6; possession of cleek with intent to take salmon, 5; stoning, &c., 1; sniggering, 2 ; rake hooks, 2 ; fishing without leave of the proprietor, 2 ; salmon roe in possession, 4 ; breach of weekly close time, 2 : fishing with small-mesh net, 1. Of the 46 persons involved, 40 were convicted, 4 not proven, and 2 withdrawn. Fines ranging from 2s. to £3 13s. were imposed. The total fines imposed amounted to £65 12s., being an average of £1 12s. 9d. for each of the 40 persons convicted. Fines were paid by 16, 12 were imprisoned, 1 was admonished, and 11 have yet to be dealt with. The alternatives ranged from 1 to 20 days.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—No change since last report.
2. With regard to the observance of bye-laws :—No change since last report.
3. Fish passes built or in prospect :—Since last report the Falls of Garry at Struan have been opened up for the passage of salmon.
4. Natural obstructions not yet dealt with are :—Falls of Tummell and Falls of Keith.

Pollutions—

1. The existing pollutions are :—Sewage of Perth and villages in district, bleaching works, &c., and several distilleries.
1. Remedial measures :—Filter works at Blairgowrie and settling ponds at Aberfeldy Distillery. The whole subject of pollution in the district is at present engaging the attention of the Board.

The Salmon Disease—

1. Disease made its appearance this year in the month of January, and reached its height in November or December.
   The river was never free of diseased fish in 1906.
2. The number of diseased fish taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	About 600	About 500
Clean, ...	About 20 altogether.	

The Spawning Season—

1. Fish were first noticed spawning on 28th October.
2. The greatest number spawned during November and December.
3. Spawning ceased about the middle of January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as fairly satisfactory. The number of spawning fish was a good average, but the river ran rather high for successful spawning. Fortunately, however, there was no disturbance of spawning beds by ice, and that was a set-off to the rather excessive flooding.

Smolts—

1. Smolts were noticed to be migrating seawards in April.
2. As a smolt year 1906 showed a long-continued migration, but there was not any large run at any time. The number seemed to be below the average, and decidedly less than in 1905.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 135,000.
2. In securing ova the numbers of male and female fish captured were respectively 15 and 21. The total number of fish netted was 183.

REPORT FROM NORTH ESK DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has not been so good, particularly by fixed engines in the sea.
   (*b*) By sweep net in tidal or fresh waters it was fair.
   (*c*) By rod and line it was very good during the last month of the season, but very poor immediately before that owing to want of rain.
2. The actual number of fish caught by rod and line from 31st August, when net fishing closed, to 31st October, when rod fishing also closed, was 149 salmon and 114 grilse—total 263—as recorded by bailiffs. No statistics as to fish caught otherwise.

   Particulars as to the times grilse appeared are as follows :—Five grilse were taken during September and 109 during October. The first grilse taken in the river by net was on 23rd April, but some had been caught previously in the sea.
3. The weight of the heaviest salmon taken during the season by rod and line was 31 lbs.

   The particulars of time and place of capture are :—October. Gallery, Hatton, Craigo, and Inglismaldie.

Protection—

1. The assessable rental for 1906 was £6485 10s.
2. The assessment levied was 6½ per cent.
3. The water bailiffs employed are 12 in number, including superintendent.
4. Particulars as to prosecutions .instituted are briefly as follows :—Two prosecutions, one for dragging for salmon, and the other for attempting to take salmon by means of a trammel net. In both cases convictions were obtained.

Obstructions to the Passage of Fish—

1. No dam dykes disused, built, or in prospect.
2. Bye-laws observed.
3. No fish passes built or in prospect.
4. Natural obstructions not yet dealt with are :—"Loups," on North Esk, about 12 miles from mouth. "Loups," on West Water (tributary), about 12 miles from mouth.

Pollutions—

1. The principal existing pollution is the effluent from North Esk Distillery, about a mile from the mouth of the river.

1. Remedial measures :—Filtering tanks.

The Salmon Disease—

Absent.

The Spawning Season—

1. Fish were first noticed spawning early in November.
2. The greatest number spawned in December.
3. Spawning ceased at the end of January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as very good.

Smolts—

1. Smolts were noticed to be migrating seawards in March, April, and May.
2. As a smolt year 1906 was fair.

No artificial propagation of salmon.

Note.—By a clerical error in the 12th Section of the Act of 1868 the word "less" is used in place of "more" relating to the raising, during the weekly close time, of the Kinnaber lade sluice at the Morphie dyke. This was proposed to be amended by Sub-section (ii.) of Section 29 of the Salmon Fisheries (Scotland) Bill of the late Government.

REPORT FROM SOUTH ESK DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.

   More particularly it has been
   - (*a*) By fixed engines in the sea, not known.
   - (*b*) By sweep net in tidal or fresh waters, below the average.
   - (*c*) By rod and line, below the average owing to low state of river.
2. Particulars as to the times salmon grilse and sea trout appeared are as follow :—The first clean fish was taken on 16th February 1906. Main run of grilse and sea trout in July. Main take of salmon in July and August.
3. The weight of the heaviest salmon taken during the season was, by net, 52 lbs. ; by rod, 34 lbs.
   The particulars of time and place of capture are—May. Rossie Sands.

Protection—

1. The assessable rental for 1906 was £3351.
2. The assessment levied was £335 2s.
3. The water bailiffs employed are 8 in number during the annual close time and generally 3 during the fishing season.
4. Particulars as to prosecutions instituted are briefly as follow :—Twelve cases of prosecutions, implicating 18 persons, mostly all for using drag hooks, gaffs, or being in possession of unclean salmon. Ten settled out of court by making money payments. Eight went to court; all convicted except one, whose case was found not proven. Fines imposed ranged from 5s. to 50s., besides expenses, the alternatives ranging from three to thirty days. There was one case of assault on a bailiff in the execution of his duty, in which a fine of 25s. was imposed, or fourteen days' imprisonment.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—No change.
2. With regard to the observance of bye-laws :—No cause for complaint.
3. Fish passes built :—On most of the dam dykes on river.
4. Natural obstructions not yet dealt with :—No natural obstructions on the river.

Pollutions—

1. The existing pollutions are mostly from the town and mills of Brechin.

The Salmon Disease—

1. Disease made its appearance in the month of December 1905, and reached its height in January 1906.
   The river was free of diseased fish in June 1906.

2. The number of diseased fish taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	...	351
Clean, ...	...	23

The Spawning Season—

1. Fish were first noticed spawning on 16th October 1905, when grilse and sea trout were seen spawning at the mouth of the Proven.
2. The greatest number spawned in December.
3. Spawning ceased about the end of January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as good.

Smolts—

1. Smolts were noticed to be migrating seawards in April 1906, and continued up to the end of June.
2. As a smolt year 1906 was a good average.

Artificial Propagation of Salmon—

No information.

REPORT FROM BERVIE DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been remarkably poor, quite below the average.

   The fishing in the district is by fixed engine.
2. Cannot give statistics of the actual number of fish caught.
3. Particulars as to the time grilse appeared :—The first grilse were got about a month earlier than usual, but few in number.

Protection—

1. The assessable rental for 1906 was £910 13s.
2. The assessment levied was 16½ per cent.
3. The water bailiffs employed are five in number.
4. Particulars as to prosecutions instituted are briefly as follows :—Two prosecutions for breaches of the weekly close time, and one for river poaching. In each case a conviction was obtained.

Obstructions to the Passage of Fish—

1. No dam dykes disused, built, or in prospect.
2. No fish passes built or in prospect.
3. No natural obstructions.

Pollutions—

None.

The Salmon Disease.

1. Disease made its appearance this year in the month of January, and reached its height in February.

   The river was free of diseased fish by the end of February.

2. The number of diseased fish taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	24	20
Clean, ...	...	...

The Spawning Season—

1. Fish were first noticed spawning on 28th October.
2. The greatest number spawned in December.
3. Spawning ceased by the middle of January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as having been one of the best, the river having been full during the most of the spawning season, and no frost to check the fish from spawning.

Smolts—

1. Smolts were noticed to be migrating seawards in the beginning of May.
2. As a smolt year 1906 was very favourable.

REPORT FROM DEE (ABERDEENSHIRE) DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been :—
   (*a*) By fixed engines in the sea, far below the average.
   (*b*) By sweep net in tidal or fresh waters, nearly an average.
   (*c*) By rod and line, a fair average.
2. Particulars as to the times grilse and sea trout appeared are as follows :—First grilse caught in sea (at Muchalls), 3rd March. First grilse caught in river (at Raik and Stells), 25th April, by net. First grilse caught in river (at Banchory-Ternan) by line (rod), 15th June. First sea trout appeared in tidal waters early in April, and were most plentiful in April and May.
3. The weight of the heaviest salmon taken during the season was 56 lbs. The particulars of time and place of capture are :—56 lbs., on sea coast with fixed engine at Cowie, near Stonehaven, on 27th July; 35 lbs., with net in tidal waters at Torry on 25th July; 38 lbs., by rod in river at Ballater on 10th October. Generally, over all, the number of salmon caught of from 30 lbs. to 35 lbs. has been larger than usual.

Protection—

1. The assessable rental for 1906 was £19,068 1s. 10d.
2. The assessment levied was at the rate of 5½ per cent.=£1048 14s. 7d.
3. The water bailiffs employed are 23 in number during close time; reduced to 4 during June, July, and August.
4. Particulars as to prosecutions instituted are briefly as follows :—11 cases of prosecutions, implicating 18 persons—

2 cases—	4 persons	using set nets during close time.
8 cases—	12 persons	for having unclean salmon in possession and using "snigger" hooks.
1 case —	2 persons	for failing to observe the weekly close time on sea coast.
11	18	

Fines ranged from £1 to £10, besides expenses. Nine individuals paid, 5 went to prison, 2 acquitted, 1 case withdrawn, 1 case settled out of court.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—No dam dykes.
2. With regard to the observation of bye-laws :—No cause for complaint.
3. Fish passes built or in prospect :—No fish passes.
4. Natural obstructions not yet dealt with are :—Practically there are no natural obstructions in the main river that would interfere with the passage of salmon.

Pollutions—

1. The existing pollutions are :—Reference is made to last year's return.
1. Remedial measures :—Reference is made to last year's return.

The Salmon Disease—

1. No disease. Numbers of dead fish have been seen and taken from the river, but they showed no evidence of disease.
2. The number of dead fish taken from the river was 372, as follows :—

	Males.	Females.
Kelts, . . .	315	57
Clean, . . .	...	...

The Spawning Season—

1. Fish were first noticed spawning on 18th October 1905.
2. The greatest number spawned in upper reaches from 18th October to 30th November 1905 ; in lower reaches from 1st December 1905 to end of January 1906.
3. Spawning ceased practically about 1st February 1906.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as rather under the mark as regards results. The number of breeding fish was plentiful, but the state of the river was unfavourable, having been in heavy flood from the 1st of November 1905 to the end of January 1906.

Smolts—

1. Smolts were noticed to be migrating seawards very early in March 1906.
2. As a smolt year 1906 was nearly an average. The migration seawards began early, and the run continued a little longer than usual.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 900,000, of which 31,500 became useless ; the remainder successfully hatched out and were put into tributaries between Drum and Braemar from 1st to 30th June 1906.
2. In securing ova the numbers of male and female fish captured were respectively 49 and 51.

REPORT FROM DON (ABERDEENSHIRE) DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been a good deal below the average.

   More particularly it has been

   (*a*) By fixed engines in the sea, below the average.
   (*b*) By sweep net in tidal or fresh waters, slightly below the average.
   (*c*) By rod and line, much below the average.

2. Particulars as to the times grilse and sea trout appeared are as follows :—First grilse caught 14th April. Sea trout appeared early in March.
3. The weight of the heaviest salmon taken during the season was 43 lbs. The particulars of time and place of capture are :—August 7th, at Berryhill Station, in the sea.

Protection—

1. The assessable rental for 1905-1906 was £4172 10s.
2. The assessment levied was at the rate of 14 per cent. = £584 3s. 4d.
3. The water bailiffs employed are 15 in number during close time. Of the 15, two and the inspector are employed for the whole year.
4. Particulars as to prosecutions instituted are briefly as follows :—13 prosecutions, implicating 19 individuals—using or being in possession of a gaff, 8 ; fishing with "snigger" hooks, 1 ; being in possession of foul salmon, 2 ; fishing with illegal nets, 2. All convicted. Fines ranged from 5s. to £5, besides expenses. Of the 19 individuals, 5 paid fine and expenses, 7 went to prison, 7 are yet at large, the police not having yet succeeded in apprehending them.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—None.
2. With regard to the observance of bye-laws :—No cause for complaint as to non-observance of bye-laws by owners or tenants of fishings.
3. Fish passes built or in prospect :—None.
4. Natural obstructions not yet dealt with :—Practically there are no *natural* obstructions on the Don requiring attention.

Pollutions—

1. The existing pollutions are discharges from paper mills on the banks of the lower river, and sewage matter from the northern district of the city of Aberdeen, extending also into the country-that is beyond the limits of the city boundary.
2. Remedial measures :—A large sewer is now in course of construction along the north bank of the river from Grandhome Bridge, about 3 miles from the sea—that is at the northern extremity of the city boundary—which, it is hoped, will clear the river of all deleterious matter arising within the city boundary, discharging it into the sea. It is believed that this sewer will be in operation before the close of 1907.

The Salmon Disease—

1. Disease made its appearance this year in the month of December, and reached its height in the middle of January.
   The river was free of diseased fish in the middle of April.
2. The number of diseased fish taken from the river and destroyed was 85, as follows :—

	Males.	Females.
Kelts, ...	50	35
Clean, ...	–	–

The Spawning Season—

1. Fish were first noticed spawning on 15th November.
2. The greatest number spawned during December.
3. Spawning ceased about the end of January.

4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as fairly good—number of spawning fish about the average. The river was considerably swollen during the whole of the spawning season.

Smolts—

1. Smolts were noticed to be migrating seawards in the end of March.
2. As a smolt year 1906 was an average one.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 85,000.
2. In securing ova the numbers of male and female fish captured were respectively 4 and 5. The ova was placed in the hatching boxes on the premises of the Aberdeen Salmon Company in Fish Street in the end of December 1905, and about 90 per cent. appeared to be successfully hatched out and were put into the rivers Don and Dee in the first week of June 1906, apparently in a healthy and vigorous condition.

REPORT FROM YTHAN DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been about the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, about the average.
   - (*b*) By sweep net in tidal or fresh waters, above the average.
   - (*c*) By rod and line, salmon below the average, sea trout above.
2. The actual number of fish caught has been as follows :—
   - (*a*) By fixed engine } Unable to obtain the information.
   - (*b*) By sweep net }
   - (*c*) By rod and line, about 120 salmon.
3. Particulars as to the times, grilse and sea trout appeared are as follows :—
   Sea trout appeared 25th February.
4. The weight of the heaviest salmon taken during the season was 45 lbs.
   The particulars of time and place of capture are :—31st July, in a bag net at Newburgh fishings. Heaviest salmon caught by rod and line, 26½ lbs., caught in Esslemont water in October.

Protection—

1. The assessable rental for 1906 was £1354.
2. The assessment levied was £178, being a little over 2s. 7½d. per £.
3. The water bailiffs employed are 5 in number, and 1 all the year round.
4. Particulars as to prosecutions instituted are briefly as follows :—A labourer, New Deer, was fined £1 and £1 2s. 6d. of expenses for a contravention of §15 (1) of the Salmon Fisheries (Scotland) Act, 1868, on 1st November 1905.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—None.
2. With regard to the observance of bye-laws :—Fairly well observed.
3. Fish passes built or in prospect :—None.
4. Natural obstructions not yet dealt with :—None.

Pollutions—

1. The existing pollutions are :—Sewage from the burgh of Ellon.
2. Remedial measures :—This matter is under consideration of the burgh commissioners.

The Salmon Disease—

1. Disease made its appearance this year in the month of December, and reached its height in March.
   The river was free of diseased fish in May.
2. The number of diseased fish taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	46	13
Clean, ...	–	–

The Spawning Season—

1. Owing to floods fish could not be seen spawning so early as usual.
2. The greatest number spawned from the middle of December to the middle of January.
3. Spawning ceased in February.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as favourable.

Smolts—

1. Smolts were noticed to be migrating seawards in April and May.
2. As a smolt year 1906 was very good.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 50,000.
2. In securing ova the numbers of male and female fish captured were not recorded.

REPORT FROM UGIE DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been about the average of former seasons.
   More particularly it has been
   - (*a*) By fixed engines in the sea, about the average.
   - (*b*) By sweep net in tidal or fresh waters, slightly improved.
   - (*c*) By rod and line, about the average.
2. The actual number of fish caught has been as follows :—
   - (*a*) By fixed engine, 900 salmon and 600 grilse.
   - (*b*) By sweep net, 800 sea trout.
   - (*c*) By rod and line, 1100 finnock and sea trout, 34 salmon and grilse.
3. Expressed as percentages for each month of the season, so as to show the times of greatest run, the figures are :—

	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.
By Fixed Engine, .	–	·6	3·3	13·3	16·3	33·3	19·3	13·3	–
By Sweep Net . .	–	-	–	–	-	25	50	25	
By Rod and Line, .	4·4	26·45	44·19	17·63	–	–	4·4	1·23	1·76

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows:—Under the first heading grilse appeared in the month of May and continued during June, July, and August. Under the second heading sea trout continued during July, August, and September. Under the third heading sea trout continued from February till May, and then during August. Grilse appeared in September and October.

4. The weight of the heaviest salmon taken during the season was, by fixed engine, 43 lbs.; by rod and line, 25 lbs.

The particulars of time and place of capture are:—The heavier fish was taken in the nets at the mouth of the river Ugie in the month of August 1906; the other in the river itself in the beginning of October 1906.

Protection—

1. The assessable rental for 1906 was £779.
2. The assessment levied was 12·625d. per £.
3. The water bailiffs employed are five in number—Mr. George Anderson, who devotes his whole time, and, when on their beats, the assistance of four gamekeepers in the employment of Colonel Ferguson, of Pitfour.
4. No prosecutions were instituted.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect:—There have been no alterations on dams this year, and no new ones built or in contemplation.
2. With regard to the observance of bye-laws:—The dams are worked in accordance with the provisions of the bye-laws (Sch. F and G) regulating the same. The cruives are only worked for the capture of fish for hatchery purposes.
3. Fish passes built or in prospect:—None.
4. Natural obstructions not yet dealt with are:—The existing fish passes afford a free passage to salmon and all other fish at all times.

Pollutions—

None.

The Salmon Disease—

1. Disease made its appearance this year in the month of December 1905, and reached its height in February 1906.

The river was free of diseased fish in the first week of May 1906.

2. The number of diseased fish taken from the river and destroyed was as follows:—

	Males.	Females.
Kelts, . . .	3	5
Clean, . . .	–	–

The Spawning Season—

1. Fish were first noticed spawning on 26th November 1905.
2. The greatest number spawned in the month of December 1905.
3. Spawning ceased in the first week of January 1906.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as good.

Smolts—

1. Smolts were noticed to be migrating seawards in the month of March 1906.
2. As a smolt year 1906 was excellent, there being favourable little spates to bring the fish down to tidal waters.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was nil, as, owing to the high state of the river, it was impossible to work the cruives.

Note.—The information herein given is mainly supplied by the river watcher, and its accuracy cannot be personally vouched from my individual knowledge.

REPORT FROM DEVERON DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, below the average.
   - (*b*) By sweep net in tidal or fresh waters, below the average.
   - (*c*) By rod and line, above the average.
2. The weight of the heaviest salmon taken during the season was 39½ lbs.
   The particulars of time and place of capture are :—Caught 5th July by bag net at Port Fife.

Protection—

1. The assessable rental for 1905-06 was £3424 14s.
2. The assessment levied was 1s. 11¾d. per £.
3. The water bailiffs employed are 11 in number, including superintendent.
4. Particulars as to prosecutions instituted :—No prosecutions at instance of Fishery Board.

Pollutions—

1. The existing pollutions are :—(1) Keith sewage in the Isla, a tributary of the Deveron, (2) Huntly sewage in the Borgie, (3) Turriff sewage in the Burn of Turriff.

1. Remedial measures :—(1) The Town Council of Keith are promoting a scheme of drainage which is expected will prevent pollution, (2) and (3) the Aberdeen County Council are pressing the Local Authorities of Huntly and Turriff respectively.

The Salmon Disease—

1. The river was free of diseased fish for the whole season.
2. The number of fish dead from natural causes taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	71	8
Clean, ...	–	–

The Spawning Season—

1. Fish were first noticed spawning on 13th October.
2. The greatest number spawned during the month of November.
3. Spawning ceased on 1st January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as far below the average.

Smolts—

1. Smolts were noticed to be migrating seawards on 27th April.
2. As a smolt year 1906 was fair.

REPORT FROM SPEY DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   (*a*) By fixed engines in the sea, about the average.
   (*b*) By sweep net in tidal or fresh waters, below the average.
2. Percentage of fish caught each month, 1906 :—

	By Net and Coble.			By Fixed Engine.		
	Salmon.	Grilse.	Trout.	Salmon.	Grilse.	Trout.
February,	18·2	–	–	3·3	–	-
March,	16·3	–	1·3	1·2	–	–
April,	14·2	·9	5·6	16·4	–	2·7
May,	13·3	–	14·4	10·4	–	5·3
June,	8·8	14·3	28·0	22·5	19·9	15·6
July,	13·2	65·1	40·2	19·2	58·5	63·1
August,	16·0	19·7	10·5	27·0	21·6	13·3
	100·0	100·0	100·0	100·0	100·0	100·0

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows :—First grilse on 31st March; principal run of grilse in July. First sea trout on 11th February; principal take of trout in June and July.

3. The weight of the heaviest salmon taken during the season was 43 lbs. to 34 lbs.
   The particulars of time and place of capture are :—February 12—1 male, 34 lbs., taken in Raik fishing, river Spey; April 17th—1 male, 35 lbs., taken in Raik fishing, river Spey ; June 28th—1 male, 35 lbs., taken in Raik fishing, river Spey ; June 29th—1 female, 40 lbs., taken at Portgordon sea fishings ; June 30th—1 male, 35 lbs., taken in Raik fishing ; July 9th—2 males, 34 lbs. each, taken at Portgordon ; July 21st—1 male, 43 lbs., and 1 male, 35 lbs., taken at Portgordon ; July 25th—1 female, 41 lbs., taken at Portgordon ; July 27th—1 male, 39 lbs., taken at Raik fishing ; August 10th—1 male, 43 lbs., taken at Raik fishing ; 1 female, 39 lbs., taken at Portgordon.

Protection—

1. The assessable rental for 1906 was £8740 15s.
2. The assessment levied was £1156 6s. 6d., being 2s. 7¾d. per £., year 1905-1906.
3. The water bailiffs employed are 47 in number.
4. Particulars as to prosecutions instituted are briefly as follows :—One man from a band of five detected salmon poachers killing salmon on Dulnain, near Carrbridge, Inverness-shire, on October 1905. Convicted at Inverness Sheriff Court for poaching, as also assault on bailiffs. Fined in all £2 10s., or 21 days' imprisonment.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—No difference during season.
2. With regard to the observance of bye-laws :—Well attended to.
3. Fish passes built or in prospect :—None during season.
4. Natural obstructions not yet dealt with :—There are none.

Pollutions—

1. The existing pollutions are :—Distilleries, being attended to.
1. Remedial measures :—Various kinds at all distilleries over the district.

The Salmon Disease—

1. Disease made its appearance this year in the month of December, and reached its height in December and January.
   The river was free of diseased fish in upper reaches by April 1906.
2. The number of diseased fish taken from the river Fiddich, of which statistics are kept, was as follows :—

	Males.	Females.
Kelts, ...	25	–
Clean, ...	–	–

The Spawning Season—

1. Fish were first noticed spawning on top reaches of river Spey on 6th October 1905.
2. The greatest number spawned from 15th October till end of November.
3. Spawning ceased by the middle of March 1906.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as a good one.

Smolts—

1. Smolts were noticed to be migrating seawards in April and May 1906.
2. As a smolt year 1906 was, owing to high volume of rivers during the migration season, not easily ascertained in April, but run of smolts fairly good in May.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 850,000.
2. In securing ova the numbers of male and female fish captured were respectively 38 and 73.

REPORT FROM LOSSIE DISTRICT.

Protection—

1. His Grace the Duke of Richmond and Gordon contributed voluntarily £73 11s. 8d., and Captain Dunbar-Brander £15, to meet expenses for year.
2. The water bailiffs employed are 3 in number during the close or spawning time, with 1 bailiff during smolt season. Superintendent of the Spey District, superintendent.
3. Particulars as to prosecutions instituted are briefly as follows :—2 men brought before the Board Clerk and admonished and cautioned for killing foul sea trout while angling in river during month of March 1906.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect:—No alteration during season.
2. With regard to the observance of bye-laws:—Well attended to.
3. Fish passes built or in prospect:—None during season.
4. Natural obstructions not yet dealt with are:—Rock falls at Kellas, on river Lossie; the question of dealing with this is still under consideration.

Pollutions—

1. The existing pollutions are:—Primarily and principally the town of Elgin sewage, woollen mills, and whisky stills.
1. Remedial measures:—Pending for many years.

The Salmon Disease—

1. Disease made its appearance this year in the month of December.
   The river was free of diseased fish at end of same month and first part of January 1906.
2. The number of diseased fish taken from the river and destroyed was as follows:—

	Males.	Females.
Kelts, ...	3	9
Clean, ...	–	–

The Spawning Season—

1. Fish were first noticed spawning on 11th October 1905.
2. The greatest number spawned during November 1905.
3. Spawning ceased 20th December 1905.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as poor compared with the two previous seasons.

Smolts—

1. Smolts were noticed to be migrating seawards in April 1906.
2. As a smolt year 1906 was reported upon by the smolt protection bailiff as very good.

REPORT FROM FINDHORN DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   (*a*) By fixed engines in the sea, below the average.
   (*b*) By sweep net in tidal or fresh waters, about the average.
   (*c*) By rod and line, below the average.
2. The actual number of fish caught has been as follows:—
   (*a*) By fixed engine, 13,643.
   (*b*) By sweep net, 4675.
   (*c*) By rod and line, below the average.

3. Expressed in numbers for each month of the season, so as to show the times of greatest run, the figures are :—

	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.
By Fixed Engine, . . .	132	504	1380	1470	2957	5623	1557	–
By Sweep Net, . . .	53	196	370	789	1302	1876	89	–
By Rod and Line, . . .	–	–	–	–	–	–	–	–

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows :—First grilse caught by fixed engine was at Findhorn on 24th April ; by net and cable, in fresh water, on 7th May ; greatest run of grilse in July ; greatest run of sea trout in June and July.

4. The weight of the heaviest salmon taken during the season was 39½ lbs. The particulars of time and place of capture are :—Burghead, by fixed engine ; time, first week of August.

Protection—

1. The assessable rental for 1906 was £3681.
2. The assessment levied was £300.
3. The water bailiffs employed are 3 in number yearly; 12 extra during spawning season.
4. Particulars as to prosecutions instituted are briefly as follows :—There was a prosecution against two parties for taking sea trout with rod and line without permission of the fishery proprietor. There was conviction in one case, and in the other the accused pled guilty.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—There are none.
2. With regard to the observance of bye-laws, they are strictly adhered to.
3. Fish passes built or in prospect :—There are none.
4. Natural obstructions not yet dealt with :—None.

Pollutions—

There are none.

The Spawning Season—

1. Fish were first noticed spawning on 13th October.
2. The greatest number spawned between 25th October and 25th November.
3. Spawning ceased 15th January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as very good ; well above the average.

Smolts—

1. Smolts were noticed to be migrating seawards in April, May, and June.
2. As a smolt year 1906 was below the average.

Artificial Propagation of Salmon—

None.

REPORT FROM NAIRN DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been :—Salmon, average ; grilse, below average.

   More particularly it has been :—

   (*c*) By rod and line :—below average.
2. The actual number of fish caught has been as follows :—

   (*a*) By fixed engine
   (*b*) By sweep net
   (*c*) By rod and line } No information obtainable.
3. Expressed as percentages for each month of the season, so as to show the times of greatest run, the figures are :—No information obtainable.
4. The weight of the heaviest salmon taken during the season was 32 lbs. The particulars of time and place of capture are :—Caught at the Oldbar in the month of July, 1906.

Protection—

1. The assessable rental for 1905 was £1203 18s.
2. The assessment levied was £155 10s. 1d.
3. The water bailiffs employed are 3 in number—1 permanent, and 2 during close season.
4. Particulars as to prosecutions instituted are briefly as follow :—One prosecution for fixing nets within the estuary of the river and taking sea trout and finnocks ; offender convicted and fined, with expenses.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—No change.
2. With regard to the observation of bye-laws :—No change.
3. Fish passes built or in prospect :—No change.
4. Natural obstructions not yet dealt with :—None.

Pollutions—

None.

The Salmon Disease—

No disease.

The Spawning Season—

1. Fish were first noticed spawning on 4th November.
2. The greatest number spawned between 10th November and 12th December.
3. Spawning ceased, 20th January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as very good in all respects.

Smolts—

1. Smolts were observed to be migrating seawards from 20th April onwards.
2. As a smolt year 1906 was an average year.

Artificial Propagation of Salmon—

1. The number of ova secured during the past season was nil.
2. In securing ova no information was obtainable.

REPORT FROM THE NESS DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.

   More particularly it has been

   (*a*) By fixed engines in the sea, below the average.
   (*b*) By sweep net in tidal or fresh waters (not now fished).
   (*c*) By rod and line, about the average. Spring angling above the average.

2. Particulars as to the times grilse and sea trout appeared are as follows :—June and July are the principal months for grilse and sea trout. When mouth of river was netted trout were noticed to be in greater numbers about the middle of June.
3. The weight of the heaviest salmon taken during the season was 40 lbs., taken in the Garry.

Protection—

1. The assessable rental for 1906 was £3502 15s.
2. The assessment levied was 2s. in the £.
3. The water bailiffs employed are 8 in number—1 superintendent, 3 permanent bailiffs, and 4 temporary watchers.
4. Particulars as to prosecutions instituted are briefly as follows :—No prosecutions. Five cases of fixed engines reported at Chanory Point, within the estuary of the Ness ; no proceedings taken, but interdict threatened.

Pollutions—

1. The existing pollutions are nothing to speak of.

The Spawning Season—

1. Fish were first noticed spawning at end of October.
2. The greatest number spawned in November and January.
3. Spawning ceased at end of January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as the best for the last eight seasons.

Smolts—

1. Smolts were noticed to be migrating seawards in the month of April.
2. As a smolt year 1906 was an average one.

REPORT FROM CONON DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been about the average.

   More particularly it has been
   - (*a*) By fixed engines in the sea, about the average, except Hilton fishery, which was above the average.
   - (*b*) By sweep net in tidal or fresh waters, a little below the average.
   - (*c*) By rod and line, Brahan and Fairburn below the average. Corl Craigdanod, Little Seatwell, Seatwell, and Strathconan above the average.
2. The actual number of fish caught has been as follows :—

   (*a*) By fixed engine }
   (*b*) By sweep net } Impossible to obtain this information.
   (*c*) By rod and line }
3. Expressed as percentages for each month of the season, so as to show the times of greatest run, the figures are :—

	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
By Fixed Engine, .	3	8	10	11	12	38	18	–	–
By Sweep Net, . .	10	9	8	6	8	39	20	–	-
By Rod and Line, .	1	8	11	12	13	22	15	10	8

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows :—Grilse made their appearance about the middle of May. Clean sea trout in tidal waters at all seasons. The main run of sea trout was in March and April.

4. The weight of the heaviest salmon taken during the season was about 24 lbs.
   The particulars of time and place of capture are :—Caught by net and coble at the mouth of the Conon in May.

Protection—

1. The assessable rental for 1906 was £3046 10s.
2. The assessment levied was 1s. 2d. per £.
3. The water bailiffs employed are 3 in number—1 permanent and 2 temporary.
4. Particulars as to prosecutions instituted are briefly as follows :—(1) Messrs. West & Strachan, salmon fishing tacksmen, Buchanhaven, Peterhead, lessees of Balintore fishings, were prosecuted for failure to remove leaders of bag nets during weekly close time. They were tried at Tain on 2nd August 1906 before Sheriff-Principal Guthrie, and convicted and fined £9. (2) Alexander Skinner, fisherman, Cromarty, was prosecuted for sending foul sea trout to Glasgow market on 25th April 1906. The prosecution was at the instance of the Fishmongers' Company on our behalf. The trial took place at Dingwall on 10th July before Sheriff-Substitute MacWatt, and accused was convicted and fined £15 13s. (including expenses), with the alternative of six weeks' imprisonment. In both cases the fines were paid.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—None.
2. With regard to the observance of bye-laws :—All the bye-laws were strictly observed.
3. Fish passes built or in prospect :—None.
4. Natural obstructions not yet dealt with are :—Falls of Rogie, Falls of Garve, Falls of Orrin, Falls of Scatwell, and Falls of Conon.

Pollutions—

1. The existing pollutions are :—Distilleries at Muir-of-Ord and Dingwall.
1. Remedial measures :—Nothing has been done.

The Salmon Disease—

No disease.

The Spawning Season—

1. Fish were first noticed spawning about the middle of October.
2. The greatest number spawned from 3rd to 15th November.
3. Spawning ceased about the middle of December.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as considerably above the average in number of fish on the redds. The river was in flood during the greater part of the spawning season.

Smolts—

1. Smolts were noticed to be migrating seawards in the last week of March.
2. As a smolt year 1906 was fairly good.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was about 12,000.
2. In securing ova the numbers of male and female fishcaptured were :— The number of male salmon was about double that of females.

REPORT FROM ALNESS DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.

   More particularly it has been
   - (*a*) By fixed engines in the sea—No fixed engines.
   - (*b*) By sweep net in tidal or fresh waters, slightly better than last year, but below the average.
   - (*c*) By rod and line, below the average.
2. Particulars as to the times grilse and sea trout appeared are as follows :—July and first fortnight of August best for grilse and salmon. Sea trout run in July. Finnochs in the river during March, April, August, and September. There was a good run of finnochs and sea trout this year.
2. The weight of the heaviest salmon taken by rod during the season was 12 lbs.

   The particulars of time and place of capture are :—It was landed by Rose from the Bridge Pool on 22nd May. Not known what was the heaviest landed from nets.

Protection—

1. The assessable rental for 1906 was £530 15s.
2. The assessment levied was 4s. per £.
3. The water bailiffs employed are as follows :—1 permanent head water bailiff, with temporary assistant watchers as may be considered by the District Board to be necessary during the spring and autumn months. During the spring of 1906 two temporary assistant watchers were employed, and during the autumn of 1906 1 temporary assistant.
4. Particulars as to prosecutions instituted :—There were no prosecutions in 1906.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—No change.
2. With regard to the observance of bye-laws :—On the principal passes the bye-laws are well kept.
3. Fish passes built or in prospect :—No change.
4. Natural obstructions not yet dealt with :—No natural obstructions.

Pollutions—

1. The existing pollutions are :—None except sewage from some dwelling-houses and the villages of Alness and Bridgend. The village sewage is the most objectionable, and is always getting worse.
1. Remedial measures :—The Mid Ross and Easter Ross District Committees have combined for the purpose of making a joint sewer by which the sewerage of the villages of Alness and Bridgend of Alness will be carried direct into the sea, and they have applied to the Local Government Board for Scotland for sanction of their scheme under Section 121 of the Public Health (Scotland) Act, 1897. It is understood that the matter is now before the Local Government Board and that the works will proceed as soon as the necessary sanction has been granted.

The Salmon Disease—

1. The river was free of diseased fish this year.

The Spawning Season—

1. Fish were first noticed spawning at the end of October.
2. The greatest number spawned about the middle of November.
3. Spawning ceased about the middle of December.
4. As regards numbers of breeding fish, and state of the water, the number of fish seen on the redds was much better than last year, but still a little below the average. Sea trout, however, were above the average. The river was in flood during most of the spring season.

Smolts—

1. Smolts were noticed to be migrating seawards in April, May, and June.
2. As a smolt year 1906 was fair.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was nil, but 40,000 ova obtained from the Helmsdale river hatched out well.

REPORT FROM KYLE OF SUTHERLAND DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, below the average.
   - (*b*) By sweep net in tidal or fresh waters, about the average.
   - (*c*) By rod and line, above the average.
2. The actual number of fish caught has been as follows :—
   - (*a*) By fixed engine
   - (*b*) By sweep net
   - (*c*) By rod and line

   } The number cannot be given, as the lessees refuse to give information on this head.
3. Grilse and sea trout appeared in May ; greatest run about 1st July.
4. The weight of the heaviest salmon taken during the season was 35 lbs.
   The particulars of time and place of capture are :—About the middle of May, at Bonar Bridge.

Protection—

1. The assessable rental for 1906 was £3458.
2. The assessment levied was 1s. 11d. per £.=£331 7s. 10d.
3. The water bailiffs employed are 17 in number.
4. Particulars as to prosecutions instituted :—No prosecutions.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—None.
2. With regard to the observance of bye-laws :—So far as possible.
3. Fish passes built or in prospect :—None.
4. Natural obstructions not yet dealt with :—No change.

Pollutions—

None.

The Salmon Disease—

1. Disease made its appearance this year in the month of October, and reached its height in October.
   The river was free of diseased fish in November.
2. The number of diseased fish taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	–	3
Clean, ...	–	–

The Spawning Season—

1. Fish were first noticed spawning on 18th October.
2. The greatest number spawned between 27th October and 12th November.
3. Spawning ceased on 25th December.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as above the average. Rivers in flood the most of the time.

Smolts—

1. Smolts were noticed to be migrating seawards in April.
2. As a smolt year 1906 was about the average.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 18,000.
2. In securing ova the numbers of male and female fish captured were respectively 45 and 16.

REPORT FROM SUTHERLAND (EAST AND WEST), BEING FOR HELMSDALE, BRORA, FLEET, KIRKAIG, INVER, LAXFORD, AND INCHARD DISTRICTS.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been about an average of previous years with rod and line; the catch of salmon with nets below the average, and of grilse slightly above the average.
2. The actual number of fish caught has been as follows:—
    (*a*) By fixed engine—Salmon, 410; grilse, 4643; trout, 157 (West Coast bag nets).
    (*b*) By sweep net—Salmon, 536; grilse, 824; trout, 427 (Brora net fishings).
    (*c*) By rod and line—River Helmsdale, upper beats, 468; lower beats, 836—total, 1304. River Brora, 330; River Laxford, 99; Loch Stack, 31 salmon.
3. Expressed as percentages for each month of the season, so as to show the times of greatest run, the figures are:—

		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	
By Fixed Engine	Salmon,	–	–	–	9·26	19·3	53·41	18·03	–	–	West Coast bag nets.
	Grilse,	–	–	–		·34	49·3	49·36		–	
	Trout,	–	–	–	2·54	8·91	33·76	54·79	–	–	
*By Sweep Net	Salmon,	–	–	10·2	53·8	19·4	4·2	5·4	7·2	-	Brora net fishings.
	Grilse,	–	–	–	–	2·83	30·67	51·34	15·16	–	
	Trout,	–	–	–	–	·72	52·38	41·09	5·81	–	
By Rod and Line, . .		1·15	3·14	14·95	17·63	22·93	16·41	10·81	8·9	4·08	River Helmsdale.

* Fishing on river suspended till 1st May; figures shown in March and April arrived at by including fish netted in Loch Brora during these months.

4. The weight of the heaviest salmon taken during the season was 37½ lbs., by Scourie bag net. Two fish of 26½ lbs. were taken on the Helmsdale by rod, one on No. 4 beat (upper) on May 10, 1906, and one on No. 4 beat (lower) on April 26, 1906.

Protection—

1. The assessable rental for 1906 was—East Coast £2160, West Coast £1317; but angling is mostly let with shootings and not apportioned at full value.
2. No assessment was levied.
3. The water bailiffs employed are 4 in number, but all estate gamekeepers are bound to assist in watching rivers and streams.
4. Particulars as to prosecutions instituted are briefly as follows:—Three men were prosecuted for poaching salmon on the Craggie Burn, a tributary of the River Helmsdale, on 16th October; they were fined 30s. each.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect:—No new dams or dykes have been built beyond those already reported on.
2. With regard to the observance of bye-laws:—The bye-laws have been observed.

Pollutions—

There are none as far as is known.

The Salmon Disease—

1. Disease made its appearance this year in the months of November and December, and reached its height in July.
2. The number of diseased fish taken from the river and destroyed was as follows:—

	Males.	Females.
Kelts, ...	3	-
Clean, ...	1 Unspawned.	-

These were the only diseased fish seen, one on Brora and three on Lower Helmsdale.

The Spawning Season—

1. Fish were first noticed spawning on October 16th on River Brora, and October 25th on River Helmsdale.
2. The greatest number spawned between the 3rd and 15th November.
3. Spawning ceased towards the end of November.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as unsatisfactory. There was a greater number of breeding fish, but the water was too high for good results.

Smolts—

1. Smolts were noticed to be migrating seawards in April and May.
2. As a smolt year 1906 was a very good one on the Helmsdale, but below the average on the Brora.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was well over a million.
2. In securing ova the numbers of male and female fish captured were respectively, 2 to 2 on the lower beats of the Helmsdale, and 4 to 1 on Upper Helmsdale.

REPORT FROM THURSO DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been an average one, as will be seen from the confidential statement showing the results of river and sea fishings since 1901 sent herewith.
2. The actual number of fish caught has been as follows :—
   - (*a*) By fixed engine, 2432.
   - (*b*) By rod and line, from 11th January to end of June, 324. In addition to this, about 150 fish are caught by the shooting tenants in the autumn of each year.
3. Expressed in numbers for each month of the season, so as to show the times of greatest run, the figures are :—

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Total.
By Fixed Engine, .	–	–	–	28	62	750	1484	108	2432
By Rod and Line, .	13	13	52	83	113	50	–	–	–

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows :—Grilse are in numbers in July.

4. The weight of the heaviest salmon taken during the season was 31 lbs. The particulars of time and place of capture are :—January, beat 4 of river Thurso.

Protection—

1. The assessable rental for 1906 was £1799.
2. The assessment levied was £134 18s. 6d.
3. The water bailiffs employed are 2 in number.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—It is proposed to dam Lochmore, but in the proposed works provision is made for the construction of fish ladders, which will enable fish to ascend.
2. Natural obstructions not yet dealt with :—None.

Pollutions—

None.

The Salmon Disease—

No disease.

The Spawning Season—

1. Fish were first noticed spawning on ova fishing on 26th October, with good results.
2. The greatest number spawned on November 15th.
3. Spawning ceased in the beginning of December.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as fair.

Smolts—

1. Smolts were noticed to be migrating seawards in May and June.
2. As a smolt year 1906 was fair.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 300,000.
2. In securing ova the numbers of male and female fish captured were not recorded.

REPORT FROM DIONARD TO STRATHY DISTRICT, FOR THE RIVERS DIONARD, POLLA, STRATHY, AND ARMADALE.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been good.
   More particularly it has been by rod and line (fair).
2. The actual number of fish caught has been as follows:—By rod and line, 240.
3. Expressed in numbers for each month of the season, so as to show the times of greatest run, the figures are:—

	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.
By Fixed Engine, . . .	–	–	–	–	–	–	–	–
By Sweep Net, . . .	–	–	–	–	–	-	–	-
By Rod and Line, . . .	–	–	–	–	–	80	110	50

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows:—10th July to 25th November.

4. The weight of the heaviest salmon taken during the season was 16 lbs.
   The particulars of time and place of capture are:—The 16th August, on the Dionard.

Protection—

1. The assessable rental for 1906 was } Nil.
2. The assessment levied was }
3. There are no water bailiffs employed.
4. Particulars as to prosecutions instituted:—Nil.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect:—None.
2. With regard to the observance of bye-laws:—None.
3. Fish passes built or in prospect:—None.
4. Natural obstructions not yet dealt with:—None.

Pollutions—

None.

The Salmon Disease—

None.

The Spawning Season—

1. Fish were first noticed spawning on 10th November.
2. The greatest number spawned from 20th to 25th November.
3. Spawning ceased 30th November.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as fair.

Smolts—

1. Smolts were noticed to be migrating seawards in April.
2. As a smolt year 1906 was fair.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was nil.
2. In securing ova the numbers of male and female fish captured were nil.

COUNTY OF SUTHERLAND — NORTH COAST (RIVERS HALLADALE, NAVER, BORGIE, KINLOCH, AND HOPE).

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been up to the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, under recent years.
   - (*b*) By sweep net in tidal or fresh waters, above recent years.
   - (*c*) By rod and line, above recent years.
2. The actual number of fish caught has been as follows :—
   - (*a*) By fixed engine,* 127 salmon, 2616 grilse.
   - (*b*) By sweep net, 325 salmon, 3541 grilse.
   - (*c*) By rod and line, 678 salmon and grilse.
3. Expressed in numbers for each month of the season, so as to show the times of greatest run, the figures are :—

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.
By Fixed Engine, .	–	–	–	–	1	43	53	3	–
By Sweep Net, . .	–	–	–	–	1	36	63	–	–
By Rod and Line, .	1	3	12	22	25	11	18	6	2

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows:—First grilse taken by rod on 4th May ; run of sea trout in March, April, and September.

4. The weight of the heaviest salmon taken during the season was 27 lbs.
   The particulars of time and place of capture are :—July, by sweep net in Bighouse Bay.

Protection—

1. The assessable rental for 1906 was £1335 per valuation roll, but angling mostly let with shootings and not apportioned at full value on roll.
2. No assessment was levied.
3. The water bailiffs employed are 5 in number, in addition to keepers who assist in watching.
4. No prosecutions.

Pollutions—

None.

The Salmon Disease—

None.

The Spawning Season—

1. Fish were first noticed spawning on 26th October.
2. The greatest number spawned between 30th October and 30th November. Fish were late in spawning.
3. Spawning ceased in second week of December.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as favourable.

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* Partly by bag nets and partly by sweep nets ; catch not kept separate

Smolts—

1. Smolts were noticed to be migrating seawards from end of April to end of May.
2. As a smolt year 1906 was good, especially towards the end of May.

Artificial Propagation of Salmon—

None.

REPORT FROM BALGAY DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the previous year's average.

More particularly it has been

(*a*) By fixed engines in the sea, below the previous year's average.
(*c*) By rod and line, below the average, especially with regard to heavy fish.

Protection—

1. The assessable rental for 1906 was £40.
2. The assessment levied was £25 14s. 4d.

Earl of Lovelace, - - -	£3	15	0
C. J. Murray, of Lochcarron, - -	21	19	4
	£25	14	4

3. The water bailiffs employed are one in number.
4. Particulars as to prosecutions instituted :—None.

The Salmon Disease—

1. The river was free of diseased fish in August.
2. The number of diseased fish taken from the river and destroyed was as follows :—One salmon, found dead in September.

The Spawning Season—

1. Fish were first noticed spawning in second week of October.
2. The greatest number spawned in October and November (especially sea trout).
3. Spawning ceased
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as unsatisfactory, too many heavy spates occurring during the latter end of the spawning season.

Smolts—

As a smolt year 1906 was about the average of former years.

REPORT FROM SKYE DISTRICTS (SNIZORT AND SLIGACHAN).

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been about or below the average.

More particularly it has been

(*a*) By fixed engines in the sea, below the average.
(*b*) By sweep net in tidal or fresh waters, average.
(*c*) By rod and line, average.

Protection—

1. The assessable rental for 1906 was £540.
2. The assessment levied was for a sum of £14 3s. 7d., and was paid in equal proportions by five proprietors.
3. The water bailiffs employed are 18 in number.

Pollutions—

None.

The Salmon Disease—

None.

REPORT FROM LOCHY DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been about the average.

   Particulars as to the times grilse and sea trout appeared are as follows :—Middle of June.
2. The weight of the heaviest salmon taken during the season was 35 lbs. The particulars of time and place of capture are :—By rod in May.

Protection—

1. The assessable rental for 1906 was £3131.
2. The assessment levied was 1d. per £.
3. The water bailiffs employed are 13 in number.
4. Particulars as to prosecutions instituted are briefly as follows :—One prosecution for salmon poaching with net in estuary against 4 persons —2 acquitted, other 2 fined £2 each and 13s. 6d. each expenses.

Obstructions to the Passage of Fish—

1. Natural obstructions not yet dealt with are :—Monessie Falls, in river Spean.

Pollutions—

1. The existing pollutions are :—Ben Nevis Distillery. As this discharges at the top of tidal head in Lochy, effect not considered injurious.

The Salmon Disease—

None seen.

The Spawning Season—

1. Fish were first noticed spawning on 20th October.
2. The greatest number spawned from 16th November to 15th December.
3. Spawning ceased end of December.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as fairly good.

Smolts—

1. River too high to notice the migration of smolts.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was about 100,000.
2. In securing ova the numbers of male and female fish captured were about equally divided.

REPORT FROM AWE DISTRICT

Take of Fish—

1 As compared with the average results of previous years, the take of fish generally throughout the district has been fully up to the average.

More particularly it has been

- (*a*) By fixed engines in the sea, there has been improvement.
- (*b*) By sweep net in tidal or fresh waters, up to 14th July improved, but subsequently, on account of flooding, no nets were used from 14th to 25th July.
- (*c*) By rod and line, this was a record year.

2. The actual number of fish caught cannot be obtained.
3. Expressed as percentages for each month of the season, so as to show the the times of greatest run, the figures are :—

	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.
By Fixed Engine, .	–	–	–	–	50	50	–	–	–
By Sweep Net, .	–	–	–	–	50	50	–	–	–
By Rod and Line, .	–	–	5	5	10	15	20	20	25

Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follows :—First appearance of grilse, 22nd May ; first appearance of sea trout, 29th May.

4. The weight of the heaviest salmon taken during the season was 47½ lbs. The particulars of time and place of capture are :—The beginning of June, at Lismore Salmon Fishings.

Protection—

1. The assessable rental for 1905-1906 was £1305 19s.
2. The assessment levied was £163 4s. 10d.
3. One water bailiff is employed.
4. Particulars as to prosecutions instituted are briefly as follows :—Tenants of Minard Salmon Fishings convicted of breach of weekly close time regulations in Tain Sheriff Court, and fined 10s. each and 10s. each expenses.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—Dam ; Lusragan River, Connel Ferry.
2. Natural obstructions not yet dealt with :—None.

Pollutions—

1. The existing pollutions are :—A pollution of the Lusragan Burn through a pipe being led therein from a neighbouring slaughter-house. The proprietors and the County Council have been approached on the matter, but no measures taken to remedy existing state of affairs.

The Salmon Disease—

No disease seen.

The Spawning Season—

1. Fish were first noticed spawning :—Sea trout, 25th October; salmon, 1st November.
2. The greatest number spawned :—Sea trout, 1st November ; salmon, 19th November.
3. Spawning ceased :—Sea trout, 15th November ; salmon, end of December.
4. As regards numbers of breeding fish, and state of the water, during the past spawning season there was a plentiful show. As rivers were in very high flood the newly-made spawning beds would suffer considerably and much ova be carried away.

Smolts—

1. Smolts were noticed to be migrating seawards on 30th April 1906.
2. As a smolt year 1906 was fairly good.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 45,000.
2. In securing ova the numbers of male and female fish captured were respectively 4 to 1.

REPORT FROM LOCH LOMOND DISTRICT, INCLUDING RIVERS LEVEN AND CLYDE.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been rather below the average.
   More particularly it has been
   - (*a*) By sweep net in tidal waters, average.
   - (*b*) By rod and line, in Loch Lomond, below the average.
2. The actual number of fish caught has been as follows :—
   - (*a*) By sweep net, in Clyde and Leven—salmon, 160 ; grilse, 554 ; sea trout, 3928.
   - (*b*) By rod and line, in Loch Lomond, very approximately—salmon and grilse, 39 ; sea trout, 472.
3. Expressed as percentages for each month of the season, so as to show the times of greatest run, the figures are :—

	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.
By Sweep Net, during May, June, and July,	..	–	-	20	48	32	–	–
By Rod and Line, ...		2	15	15	28	13	21	6

Particulars as to the times grilse and sea trout were taken in Clyde and Leven are as follows :—Grilse, first appearance 7th June ; greatest run, 2nd July to 9th July. Sea trout, first appearance 5th May ; greatest run, 2nd July to 9th July.

4. The weight of the heaviest salmon taken during the season was 16 lbs.
   The particulars of time and place of capture are :—In Clyde nets on 27th July.

Protection—

1. The water bailiffs employed vary in number according to season. Beginning with 2 they increase to 9 till fish have spawned and returned to Loch Lomond from the tributary streams.
2. Particulars as to prosecutions instituted are briefly as follows :—

Illegal gaffing of fish in Leven . . .	6	convictions.
Illegal netting in Leven	4	,,
Snaring fish in Leven	2	,,
Taking sea trout in close time . . .	2	,,
	14	

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—None.
2. With regard to the observance of bye-laws :—These are generally well observed.
3. Fish passes built or in prospect :—None.
4. Natural obstructions not yet dealt with are :—These were fully detailed in former reports, the most important being the obstruction at the Pot of Gartness, on the riv Endrick.

Pollutions—

1. The existing pollutions are, as formerly, detailed, and consist of the following :—
   1. *The Clyde.*—The town sewage from Glasgow and other towns on its banks and watershed.

2. *The Leven.*—(1) Town sewage from smaller towns in Vale of Leven. (2) Town sewage from Dumbarton, which has recently been vastly increased by the conversion of earth-closets into water-closets. (3) Industrial pollution from works on the Leven banks.

1. Remedial measures :—
   1. *The Clyde.*—The well-known purification works of Glasgow Corporation now in progress.
   2. *The Leven.*—(1) An interdict action now pending at the instance of the Loch Lomond Angling Improvement Association and the Colquhoun Trustees against the Western District Committee of the County Council of Dumbarton has stopped a threatened increase of town sewage pollution at Alexandria by two new sewers. Formerly existing sewers still pollute. (2) No remedial measures are being taken by the town of Dumbarton to protect the river and parties having rights therein. (3) The United Turkey Red Company are endeavouring to stop, by additional filtration, certain noxious effluents complained of, but so far the Calico Printers' Association have taken no steps to prevent certain noxious effluents entering the river Both these bodies have met complainers in an amicable spirit.

The Salmon Disease—

1. Disease made its appearance this year in the month of December. The river was free of diseased fish in January.
2. The number of diseased fish taken from the river and destroyed was as follows :—

	Salmon.	Males.	Females.
Kelts, ...	3	2	1
Clean, ...	—	—	—

The Spawning Season—

1. Fish were first noticed spawning on 10th October.
2. The greatest number spawned in November.
3. Spawning ceased in January.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as an average one in numbers of fish, flooded as to state of water, and unsatisfactory on the whole.

Smolts—

1. Smolts were noticed to be migrating seawards at end of April.
2. As a smolt year 1906 was a good average year.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was 40,000 sea trout.
2. In securing ova the numbers of male and female fish captured were not observed.

REPORT FROM AYR DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been rather lower. The fish appeared to be as numerous, if not more numerous, than in former years, but a long spell of dry weather in August and September precluded fishing. It was only during the closing days that the river was in order.

2. The actual number of fish caught has been as follows :—
    - (*a*) By fixed engine, none. (No fixed engines are fished.)
    - (*b*) By sweep net, none. (No sweep nets are fished.)
    - (*c*) By rod and line, so far as officially known, 81. The numbers must have been considerably greater, but there is no means of getting reliable information.

Particulars as to the times grilse and sea trout appeared are as follows :—The first salmon run took place on 9th March. They were not in any number. The first grilse run took place in June, but the majority of the grilse ran about the end of July and beginning of August. The principal run was in July.

4. The weight of the heaviest salmon taken during the season was 23 lbs., so far as officially known.

The particulars of time and place of capture are :—Caught by keeper on Enterkine water ; line, fly. Water of ordinary size. There were several other fish caught over 18 lbs., and the majority of them were over 12 lbs.

Protection—

1. The assessable rental for 1906 was £110.
2. The assessment levied was £55.
3. There is one water bailiff employed.
4. Particulars as to prosecutions instituted are briefly as follows :—There were no prosecutions instituted during the year. The proceedings taken last year seem to have had a good effect.

Obstructions to the Passage of Fish—

1. With regard to the observance of bye-laws :—The bye-laws are generally observed.
2. Natural obstructions not yet dealt with are :—The only obstruction is the dam at Catrine Cotton Mills, regarding which the Board are presently in correspondence with the proprietors with a view to having it remedied.

Pollutions—

None.

The Salmon Disease—

None.

The Spawning Season—

1. Fish were first noticed spawning on 22nd November.
2. The greatest number spawned in November and December.
3. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as above the average, especially as regards sea trout.

Smolts—

1. Smolts were noticed to be migrating seawards in April and May.
2. As a smolt year 1906 was equal to last year.

REPORT FROM DOON DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been greater.

More particularly it has been
- (*a*) By fixed engines in the sea, no information.
- (*b*) By sweep net in tidal or fresh waters—no sweep nets worked.
- (*c*) By rod and line, good.

2. The actual number of fish caught has been as follows :—
   (*a*) By fixed engine, no information.
   (*b*) By sweep net, none.
   (*c*) By rod and line, lower reaches, 115 salmon and 131 sea trout, so far as known. As regards the upper reaches, there is no information of a reliable nature obtainable. So far as report goes, however, the fishing was good.
3. Particulars as to the times grilse and sea trout appeared are as follows :— Grilse appeared in July ; sea trout ran about the end of May and June after that there were runs through the whole season to the closing day.
4. The weight of the heaviest salmon taken during the season was 35 lbs., by net in sea ; by rod, 18 lbs.
   The particulars of time and place of capture of the latter are :—Killed by proprietor on Doonside water, three miles from sea.

Protection—

1. The assessable rental for 1906 was £491 6s.
2. The assessment levied was £122 16s. 6d.
3. The water bailiffs employed are two in number.
4. Particulars as to prosecutions instituted are briefly as follows:—Two men were prosecuted and imprisoned for taking sea trout during the close time.

Obstructions to the Passage of Fish—

1. With regard to the observance of bye-laws :—The bye-laws are generally observed.

Pollutions—

None.

The Salmon Disease—

None.

The Spawning Season—

1. Fish were first noticed spawning at end of October.
2. The greatest number spawned in December.
3. Spawning ceases in February generally.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as up to the average.

Smolts—

1. Smolts were noticed to be migrating seawards in June.
2. As a smolt year 1906 was not so good.

REPORT FROM GIRVAN DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been poor and below the average, though perhaps not so bad as last year.
2. The actual number of fish caught has been as follows :—
   (*a*) By fixed engine, about 220 salmon, 320 grilse, and 1100 trout.
   (*b*) By sweep net, none.
   (*v*) By rod and line, none.
3. Particulars as to the times salmon, grilse, and sea trout appeared are as follows :—First salmon caught 5th May 1906 ; first grilse, 1st June 1906 ; first trout, 25th April 1906.
4. The weight of the heaviest salmon taken during the season was 30 lbs.
   The particulars of time and place of capture are :—July 1906 ; Lendalfoot.

Protection—

1. The assessable rental for 1906 was £541 10s.
2. The assessment levied was £33 16s. 10d.
3. The water bailiffs employed are 1 in number.
4. Particulars as to prosecutions instituted :—None.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—No change.
2. With regard to the observance of bye-laws :—On one occasion the weekly close time was not observed by the tenant of Turnberry fishery in July. The matter was, however, compounded by lessee paying £1 1s. to a local charity.
3. Fish passes built or in prospect :—None.
4. Natural obstructions not yet dealt with are :—Fairlaw Linn, near upper part of river.

Pollutions—

None.

The Salmon Disease—

No salmon disease observed.

The Spawning Season—

1. Fish were not noticed spawning owing to heavy freshes.
2. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as good. As the bailiff reported, more fish than have been seen for some years back were about the spawning redds, though they were not actually observed spawning.

Smolts—

1. Smolts were noticed to be migrating seawards in April.
2. As a smolt year 1906 was considered an average one.

General Remarks—

Several meetings of proprietors were held to consider how the fishings might be improved, and it was agreed to approach the proprietors of the sea fisheries with the object of getting the whole of the nets in the district removed for a season. Several proprietors indicated their willingness to give this proposal a trial, but as the Crown authorities intimated that they were not inclined to fall in with so extensive a scheme, even should their tenant be willing to forego his rights, the negotiations fell through. It was also found impossible to carry out Mr. Calderwood's alternative scheme, viz., the removal of the nets next the river mouth on each side.

REPORT FROM STINCHAR DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of generally throughout the district has been good.
2. Particulars as to the times grilse and sea trout appeared are as follows :—About the 1st June.
3. The weight of the heaviest salmon taken during the season was 28 lbs.

Protection—

1. The assessable rental for 1906 was £400.
2. The assessment levied was £15.
3. One water bailiff employed all the year round, and an additional one during spawning period.
4. Particulars as to prosecutions instituted :—None.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—None.
2. Fish passes built or in prospect :—None.
3. Natural obstructions not yet dealt with :—None.

Pollutions—

1. No pollution.
1. Remedial measures :—Unnecessary.

The Salmon Disease—

1. Disease made its appearance this year in the month of November.

The Spawning Season—

1. Fish were first noticed spawning on December 1st.
2. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as good.

Smolts—

1. Smolts were noticed to be migrating seawards on 1st May.
2. As a smolt year 1906 was a good average season.

REPORT FROM CREE DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, below the average, and in this department there is a constant falling-off almost every year.
   - (*b*) By sweep net in tidal or fresh waters, below the average, but better than last year.
   - (*c*) By rod and line, probably the average at least.
2. The actual number of fish caught has been as follows :—
   - (*a*) By fixed engine, } Not known.
   - (*b*) By sweep net, }
   - (*c*) By rod and line, 111.
3. Expressed as percentages for each month of the season, so as to show the times of greatest run, the figures are :—

	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.
By Fixed Engine, . . .			Not known.					
By Sweep Net, . . .			Not known.					
By Rod and Line, . . .	–	1	34	4	18	30	20	4

4. The weight of the heaviest salmon taken during the season was reported as 14 lbs.

Protection—

1. The assessable rental for 1906 was £868 10s.
2. The assessment levied was £28 19s.
3. The water bailiffs employed are 3 in number all the year round, and 4 in June, July, August, and September.
4. Particulars as to prosecutions instituted :—None.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect:—None. There is an abstraction of water for wood merchant's mill to a far greater extent than is approved of at Minnagaff from dam dyke on Penkiln Burn, and negotiations are proceeding to regulate this.
2. With regard to the observance of bye-laws :—Regular.
3. Fish passes built or in prospect :—None.
4. Natural obstructions not yet dealt with are on High Cree, at Bargrennan Lynn.

Pollutions—

None.

The Salmon Disease—

1. Disease made its appearance this year in the month of June, and reached its height in July.
   The river was free of diseased fish in latter part of July, after floods.
2. The number of diseased fish taken from the river and destroyed was 7, already dead, and were buried.

The Spawning Season—

1. Fish were first noticed spawning on last week of October.
2. The greatest number spawned during November.
3. Spawning ceased end of December.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as excellent.

Smolts—

1. Smolts were noticed to be migrating seawards in May and June.
2. As a smolt year 1906 was quite up to the average.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was nil.

REPORT FROM DEE (SOLWAY) DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been average.
   More particularly it has been—
   - (*a*) By sweep net in tidal or fresh waters, about average.
   - (*b*) By rod and line, very light.
2. The actual number of fish caught—
   - (*a*) By sweep net, not ascertained.
   - (*b*) By rod and line, very few.
3. Expressed as percentages for each month of the season, so as to show the times of greatest run, the figures are :—
   By sweep net, average over season.
   By rod and line, very small number.
   Particulars as to the times grilse and sea trout appeared, as included in the above return, are as follow :—About the 1st of June.
4. The weight of the heaviest salmon taken during the season was 32 lbs.
   The particulars of time and place of capture are :—July.

Protection—

1. The assessable rental for 1905 was £1580.
2. The assessment levied was £79.
3. The water bailiffs employed are 15 in number.
4. Particulars as to prosecutions instituted :—Nil.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—Nil.
2. With regard to the observance of bye-laws :—Properly observed.
3. Fish passes built or in prospect :—Nil.
4. Natural obstructions not yet dealt with :—None.

Pollutions—

No pollutions.

The Salmon Disease—

No disease.

The Spawning Season—

1 Fish were first noticed spawning at end of November.
2. The greatest number spawned by end of December.
3. Spawning ceased middle of January.
4. As regards number of breeding fish, and state of the water, the past spawning season is regarded as good.

Smolts—

1. Smolts were noticed to be migrating seawards in April to end of May.
2. As a smolt year 1906 was good

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past year was nil.
2. In securing ova the numbers of male and female fish captured were respectively nil.

REPORT FROM ANNAN DISTRICT.

Take of Fish—

1. As compared with the average results of previous years, the take of fish generally throughout the district has been below the average.
   More particularly it has been
   - (*a*) By fixed engines in the sea, below the average.
   - (*b*) By sweep net in tidal or fresh waters—No sweep-net fishing in district.
   - (*c*) By rod and line, 66 or thereby.
2. The actual number of fish caught has been as follows :—
   - (*a*) By fixed engine—Cannot be given.
   - (*b*) By sweep net—None in the district.
   - (*c*) By rod and line—Cannot be given.
3. Particulars as to the times grilse and sea trout appeared are as follows :—Grilse, second week of July ; trout, March.
4. The weight of the heaviest salmon taken during the season was 40 lbs.
   The particulars of time and place of capture are :—24th August ; Annan Burgh.

Protection—

1. The assessable rental for 1906 was £3256.
2. The assessment levied was £447 14s.=2s. 9d. per £.
3. The water bailiffs employed are 4 in number.
4. Particulars as to prosecutions instituted are briefly as follows :—The following persons were dealt with at the Sheriff Court, Dumfries, for contravention of Salmon Act, viz. :—

1906.

Feb.—Robert M'Vittie,	Lochmaben,	£5 and 6s. 6d.	expenses,	or 30 days.
John Little,	Do.	£1 and 6s. 6d.	do.	or 7 days.
Alexander Moony,	Do.	£2 and 6s. 6d.	do.	or 14 days.
John Brown,	Do.	£1 and 6s. 6d.	do.	or 7 days.
William Richardson,	Do.	£1 and 6s. 6d.	do.	or 7 days.
Thomas Brown,	Do.	£1 and 6s. 6d.	do.	or 7 days.

July.—Alexander Johnstone, Moffat, not proven.

1906.

Sep.—	Charles Bell,	Whinnyrigg,	diet deserted.
	Andrew Clark,	Watchhill,	do.
	James Campbell,	Do.	do.
	Amos Walker,	Annan,	2s. 6d. and 17s. 6d. expenses, or 7 days.
	John Farish,	Do.	proceedings dropped.
Oct.—	John Woodhouse,	Do.	10s. and 16s. expenses, or 10 days.
	Jas. Woodhouse, jun.,	Do.	do. do.

Obstructions to the Passage of Fish—

1. Dam dykes disused, built, or in prospect :—No alteration.
2. With regard to the observance of bye-laws :—Duly observed.
3. Fish passes built or in prospect :—No alteration.
4. Natural obstructions not yet dealt with :—None.

Pollutions—

None.

The Salmon Disease—

1. Disease made its appearance this year in the month of January, and reached its height in February.

   The river was free of diseased fish in April.
2. The number of diseased fish taken from the river and destroyed was as follows :—

	Males.	Females.
Kelts, ...	2	2
Clean, ...	–	–

The Spawning Season—

1. Fish were first noticed spawning on 9th December.
2. The greatest number spawned end of January and beginning of February.
3. Spawning ceased end of February.
4. As regards numbers of breeding fish, and state of the water, the past spawning season is regarded as unsatisfactory.

Smolts—

1. Smolts were noticed to be migrating seawards in the beginning of May.
2. As a smolt year 1906 was exceptionally good.

Artificial Propagation of Salmon—

1. The number of ova secured locally during the past season was nil.

APPENDIX II.

THE SCALES OF SALMON.

By H. W. JOHNSTON.

In the *Twenty-third Annual Report* (Part II., Appendix II.) I gave an account of an examination of the scales of Tay grilse and salmon, and showed that much useful information might be gathered from them as to the life-history of the fish. Further investigation and recaptures of "marked" smolts, grilse, and salmon, have confirmed my deductions and suggested some new points, which I now propose to refer to.

When writing previously I divided my subject into three parts, treating of

I. Parr and smolts.
II. Maiden grilse and salmon up to the time of their first return to the river.
III. Salmon that had previously returned to fresh water and spawned.

It would occupy too much time and space to recapitulate the contents of my first paper, and this must be read in connection with it.

I. Parr and Smolts. (Plate I.)

The difficulty of securing specimens of river parr of known ages obliged me, in the *Twenty-third Report,* to limit my references to those that had been artificially reared at Tugnet. The good and regular feeding in confinement had caused these young fish to develope a larger size and more scale ridges than we were likely to find in parr that had to seek their food under natural conditions, and consequently the indications afforded were in some ways misleading.

During the last three years, however, some experimental work has been done on the Tay with a small-mesh net, the results of which have been recorded by Mr. Calderwood,* and this has given me the opportunity of examining natural parr and smolts taken during different months. By comparing and classifying their scales one is able to arrive at a fairly regular sequence in the number and arrangement of lines put on while feeding in fresh or brackish water, and an approximate estimate of age can in some cases be obtained. For this purpose size and weight cannot be much relied on, as these are so largely dependent on feeding. The number of ridges on the scale is also affected by the same cause, and we cannot expect that a parr reared in the cold and rocky waters of the Garry or Tilt will have the same chance of obtaining food all the year round as one whose infancy has been passed in the upper stretches of the Tay, where the water, regulated by the loch, maintains a comparatively warm temperature in the winter months. In fact, as I previously have stated, statistics based on the number of ridges on the scale are not satisfactory, but, so far, I have been unable to find any better method of comparison. The disadvantages are perhaps more apparent when dealing with fish in their younger stages,

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**Twenty-third Annual Report* (Part II., App. III.). *Twenty-fourth Annual Report* (Part II., App. III.).

as up to the time of leaving the river their feeding has been affected by purely local conditions, such as the supply of food, the weather, and also perhaps by the age and characteristics of their parents, so that in taking specimens from fish congregated in the estuary we are somewhat handicapped by their variety and our ignorance of their original habitats. The arrangement of the lines on the scale is a more reliable guide than the numbers, as in summer, when food is plentiful, they are generally wider apart than in winter, when food is scarce, and the feeding of each season is often distinctly shown by the alternating series of differently spaced lines.

Notwithstanding the difficulties in arriving at a correct conclusion, I shall give in the following Tables the results of my examination of the scales of parr and smolts of *Salmo salar*, but wish the work to be regarded as only experimental and requiring further investigation :—

(1) *Parr—1 year old and younger.*

Date.	Length.		Number of Lines on Scale.				Where Captured.	Remarks.
	Cm.	Inches.	Total.	1st Year.	2nd Year.	3rd Year.		
Nov. 1905	6·	2⅜	5 to 9	5 to 9	.	.	Tidal water.	Scales rather immature, but growth good.
,, ,,	6·9	2¾	5 to 8	5 to 8	.	.		
Dec. ,,	5·4	2⅛	8 to 10	8 to 10	.	.		Small growth.
Jan. 1906	5·3	2⅛	5 to 9	5 to 9	.	.		
Feb. ,,	4·6	1⅞	3 to 5	3 to 5	.	.		Scales very immature and barely overlapping, with ridges indistinct.
,, ,,	4·8	1⅞	3 to 6	3 to 6	.	.		
Mar. ,,	5·5	2⅛	5 to 7	5 to 7	.	.		

The ridges on the scale completely surround the centre of growth, and are well defined on both the anterior and slightly elongated posterior areas. The membrane protecting the scale is thick in all these young fish. The two parr taken in February were remarkably small, with undeveloped scales, and it is difficult to account for these backward specimens being in tidal water at this season of the year, unless they had descended in search of food.

(2) *Parr—commencing their Second Year.*

Date.	Length.		Number of Lines on Scale.				Where Captured.	Remarks.
	Cm.	Inches.	Total.	1st Year.	2nd Year.	3rd Year.		
April 1906	5·6	2¼	12	10	2	.	Tidal water.	
,, ,,	6·8	2⅝	11	9	2	.		
May 1904	5·7	2¼	9	6	3	.		
,, 1905	6·8	2⅝	12	9	3	.		

In April and May the new growth of the second year begins to surround the scale, and on the anterior margin the ridges are not so close together as those put on during the preceding winter months, and only a few of them continue round the posterior area.

(3) *Parr*—1½ *years to* 2 *years old.*

Date.	Length.		Number of Lines on Scale.					Where captured.	Remarks.
	Cm.	Inches.	Total.	1st Year.	2nd Year.		3rd Year.		
					S.	*W.*			
Sept. 1905	10·1	4	22	6	12	4	.	7 miles up river.	Sent as partial smolts, but the formalin in which they were preserved injured their colour.
,, ,,	10·4	4⅛	20	6	10	4	.		
,, ,,	11·6	4½	21	6	12	3	.		
,, ,,	12·2	4¾	22	9	9	4	.		
Oct. ,,	10·5	4⅛	24	8	12	4	.		
Nov. ,,	9·	3½	17	5	10	2	.	Tidal water.	Scales slightly silvery.
,, ,,	12·	4¾	21	5	12	4	.		
,, ,,	11·8	4⅝	26	7	12	7	.		
,, ,,	14·5	5¾	26	8	12	6	.		
Dec. ,,	11·	4⅜	18	7	11	0	.		Thick membrane over scales.
,, ,,	11·7	4⅝	19	8	11	0	.		
Jan. 1906	8·9	3½	17	9	8	0	.		
Feb. ,,	8·5	3⅜	19	7	9	3	.		Membrane clearing off scales and operculum silvery.
,, ,,	10·5	4⅛	20	10	7	3	.		

Note.—Lines of the second year are divided into *S.* (summer) and *W.* (winter).

The specimens taken in September, October, and November have finished their second summer's feeding, and all show the effect of colder weather and diminished growth in a contraction of the lines towards the periphery of the scale. These were sent me as partial smolts, and it is curious that all the specimens in this Table which have lines of winter feeding on their scales were more or less silvery; while those got in December and January had no winter lines, and were dark in colour, owing to the covering membrane being thick. The September-October parr were taken at Stanley, and much resemble the November catches in the tidal water, if allowance is made for a few weeks' extra feeding, which perhaps the latter benefited by. After this month the same class of fish was not found when netting the upper part of the estuary, and may have migrated seawards without assuming the real silvery garb of the May smolt, which possibly is dependent on temperature. While migration is suggested by their disappearance from the tidal water, it must be remembered that parr display a roving disposition, and often show as much eagerness to push up stream as salmon do at the approach of the spawning season. The December-January specimens were few in number, and while the last summer's feeding was apparent, there were no signs of winter growth, and the membrane over the scales was thick, while in February-March we find it more delicate along with some sheen on the operculum, pointing to the commencement of the smolt stage.

[Table.

(4) *Smolts—commencing their Third Year.*

Date.	Length.		Number of Lines on Scale.					Where Captured.	Remarks.
	Cm.	Inches.	Total.	1st Year.	2nd Year.		3rd Year.		
					S.	*W.*			
Mar. 1906	11·6	4½	25	8	10	4	3	Tidal water.	
April 1904	11·5	4½	23	8	9	3	3		
,, ,,	12·7	5	27	9	10	3	5		
May 1903	11·4	4½	25	9	8	4	4		
,, ,,	14·	5½	23	6	8	3	6		
,, 1904	12·5	5	28	9	12	4	3		
,, ,,	13·8	5½	24	8	10	3	3		
,, 1903	12·7	5	26	9	11	3	3	7 miles up river.	
,, ,,	13·9	5½	27	6	9	4	8		
,, ,,	11·5	4½	21	6	10	3	2	35 miles up river.	

Note.—Lines of the second year are divided into *S.* (summer) and *W.* (winter).

Here we have the contracted lines of the second winter's growth followed by the more open ones representing the early part of the third summer. The membrane covering the scales is very thin, and the smolt dress has been assumed. These young fish are now a little over two years old, and are evidently on their way to the sea.

There is, however, a different class of parr and smolts which I have come across, and am rather puzzled by their scales. I have found them as parr in summer and spring about Grandtully, on the upper Tay, and as smolts in the estuary when migration was taking place. Their scale ridges can be divided into three periods, with a doubtful demarcation between the first and second posterior ones, and a well-defined separation between the second and third on the anterior area. I annex details and give the number of lines in each division instead of for each year.

(5) *Parr and Smolts of Doubtful Age.*

Date.	Length.		Number of Lines on Scale		Where Captured.	Estimated Age.	Remarks.
	Cm.	Inches.	Total.	Divided.			
July 1904	11·4	4½	29	7–12–10	35 miles up river.	Under 1½ years.	Parr.
,, ,,	11·6	4½	27	8–11–8			
,, ,,	12·7	5	29	7–13–9			
,, 1905	11·6	4½	28	7–12–9			
,, ,,	12·6	5	29	9–11–9			
April 1903	12·7	5	34	8–14–12		2 years.	
,, 1906	12·3	4⅝	35	8–16–11	Tidal water.	2 years.	Smolts.
,, ,,	16·3	6½	37	10–14–13			
May 1903	15·7	6¼	35	9–13–13			
,, ,,	15·	5⅞	31	7–12–12			

Although the above specimens have more numerous lines and are larger in size than those in Table 3, I am inclined to put them also down as 1½ years old in summer and two years old in spring, and to consider that they have been hatched very early in the year in a part of the river where food was abundant, with the result that they were strong enough to feed vigorously both in the summer and winter of their first year, and again in the summer of their second season. The first impression was that these were a year older, but on looking at the scales of yearlings from hatcheries one finds traces of the first two divisions at this early stage.

No experimental netting for parr has yet been done in the upper waters of the Tay or in its tributaries, so we are unable to say if the small fish in each stream display any difference. Those mentioned as taken up the river (at Grandtully) were caught by rod and showed no appearance of silvery scales either in July or in April, but their general features were similar to those of the tidal smolts in the Table. I am not at present prepared to say more about this class, except to point out that the scales of some mature salmon have the same divisions of the corresponding lines of infancy round the centre of growth.

(6) *Stormontfield Parr and Smolts—2 years old* (*artificially reared*).

Date.	Length.		Sex.	Weight, oz.	Number of Lines on Scale.				Remarks.
	Cm.	Inches.			Total.	1st Year.	2nd Year.	3rd Year.	
1906 Mar. 13	7·6	3	F. ?	$\frac{1}{16}$	19	8	11	–	Parr.
,, ,,	11·	4⅜	F.	$\frac{7}{16}$	25	10	15	–	,,
,, ,,	11·9	4¾	F.	½	26	10	16	–	,,
,, ,,	14·1	5½	F.	$\frac{15}{16}$	30	12	16	2	Smolt.
,, ,,	14·2	5½	M.	1	34	15	16	3	Nearly smolt.
,, ,,	16·1	6⅜	M.	$1\frac{5}{16}$	35	14	18	3	,,

These were hatched at Dupplin, and were transferred to Stormontfield ponds in the end of April 1904 when about two months old and ¾-inch in length. When they had a little more than completed their second year, on 13th March 1906, the water was run off the ponds under Superintendent Lumsden's supervision, and the juvenile fish were allowed to find their way through the exit pipe into the Tay. At first none of them took advantage of the free passage, but as the water subsided they made for the river in large numbers, and it was easy to secure as many as were wanted with a small landing net. A representative selection was kept in pails until measured, and the dimensions are given.

Length (cm.) –	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.
Number (81 in all)	2.	7.	13.	10.	12.	17.	11.	4.	2.	1.	1.	1.

The smallest was 6·8 cm. (2¾ inches) and the largest 18 cm. (7⅛ inches) The majority were between 9 cm. (3½ inches) and 13 cm. (5⅛ inches) and the numbers show the usual variation in the sizes of fish of the same age. A few of the larger ones had assumed the smolt dress, but the most of them were still parr. Some specimens were retained for examination, and particulars of their scales are given in the above Table. The sex was ascertained with the aid of a microscope, but, of course, the organs were in a rudimentary state, though the ova in all the females, except the smallest, was quite distinct.

The scales of the two smaller specimens were protected by thick membrane, but on all the others it was more attenuated. The number and arrangement of the ridges on the scales of these Stormontfield fish is not quite the same as in river parr of similar age, and this is probably a result of hand-feeding, but we do not find as large a growth as in the Tugnet specimens (referred to in the *Twenty-third Report*), where perhaps the dietary was more liberal and the water warmer. On the day that the Stormontfield ponds were run off they were covered by a thin coating of ice, and the temperature of the water was about 33°, although it comes from the Tay, which at the same time was 3° warmer; the explanation probably being that the mill lade from which the water is taken runs for a long distance between wooded banks and partially under a cliff.

There were no younger parr in the ponds when I visited them in March 1906, but a few weeks after the liberation of the two-year-olds the water was restocked on 27th April and 2nd May with 70,000 fry, which were about 64 days old when transferred from Dupplin Hatchery, so that in March 1907 they were practically a year old. With the sanction of the Tay District Board, I tried in that month to secure a few of these young fish, but they had not wakened out of their winter lethargy, and I only managed to obtain one specimen (9·4 cm., $\frac{3}{8}$ oz.), which may not be representative. A photograph of a scale is included in Plate I.

There has always been much doubt expressed as to the utility of hatcheries, and no direct satisfactory proof has been brought forward that they are worth the money expended on them. All that can be said is that they do no harm and may do good. If we could show that some of the salmon which return from the sea are hatchery fish, then there would be something to go upon; but till recently there has been no way of identifying them except by the very unreliable method of fin mutilation. Now, however, this difficulty has been overcome and smolts marked with a wire have been recaptured both as grilse and salmon, and are afterwards referred to. If the same method of marking with a distinctive wire were adopted in the case of artificially-reared smolts we would be able to identify them in after years, and even to compare the percentage of recaptures with the information derived from marking river smolts, and thus would be a step nearer the solution of the problem.

In the same way valuable results might ensue from using special wires to mark the parr in the main river and in the tributaries, with the idea of finding out if the early environment of the fish has any influence on its growth and habits in after life. For instance, in the Tay there are two distinct classes of spring fish—one of four-year-old salmon weighing about 10 lbs., and the other chiefly composed of five-year-old fish of abont double this weight. The greater number of both classes, in an ordinary season, appear to be fish returning to fresh water for the first time, and it would be interesting to find out if the reason for this difference in the age of return can be traced to the domicile of origin, or is dependent on unknown causes in the ocean.

II. Maiden Fish.

(1) *Grilse.* (Plate II.)

In the *Twenty-third Report* I pointed out that the scales of all the grilse I had examined showed that they had passed a year or more in the sea after migrating as smolts, and that none of them had returned to the river at an earlier period. For many years this has been a much-disputed point, as some writers held similar views and others believed that the smolt came back within a few months as a grilse, and relied upon the well-known experiments at Stormontfield half a century ago in support of their contention. They also argued that if there was a difference of 8 lbs. or 10 lbs. between the May grilse and the August grilse the growth must be extremely rapid, and that, therefore, there was nothing extraordinary in a smolt increasing to a 2-lb. grilse in the course of two or three months. We have now, however, the indisputable fact that none of the smolts marked in 1905 were recaptured in the same year, and that many of them were retaken as grilse in the following year. For this important advance in our knowledge we are indebted to the Tay Salmon Fisheries Co., under Mr. P. D. Malloch's management, and to the careful way in which Mr. W. M^cNicol marked the delicate fish with a silver wire twisted into a loop which enclosed the front rays of the dorsal fin and yet left room enough for their development. The marking was done between 25th April and 6th June 1905, and the first "wired" grilse was caught on 1st June 1906, when it weighed $2\frac{15}{16}$ lbs. The silver loop enveloped the anterior rays of the fin, and their growth had altered its position from the base to 2 cm. higher up the longest ray, which measured 5·1 cm. The greatest care was taken to test the authenticity of all the facts connected with this fish, and there did not seem any room for error, but ample confirmation came in during the season in the shape of other "wired" grilse with a similar history, and so the success of this smolt-marking experiment has been completely proved, not only up to the grilse stage, but to the return of the fish as small spring salmon, and while this is in the press, one has been reported as a young summer fish of 13 lbs., with a few lines of its third years' feeding in the sea visible on the margin of the scale. There has not yet been time for the recapture of any of these "wired" smolts as older fish.

I have examined the scales of some of these grilse, and now give details.

[Table.

Some "Wired" Smolts Recaptured as Grilse.

Date.	Lbs.	Number of Lines on Scale.							Remarks.	
		Up to Smolt Stage (River).				After Smolt Stage (Sea).				
		Total.	1st Year.	2nd Year.	3rd Year.	Total.	3rd Year.	4th Year.		
1906. June 1	$2\frac{15}{16}$	24	8	14	2	35	29	6		All these grilse were marked with wire when migrating as smolts between 25th April and 6th June 1905 (none marked between 3rd and 16th May).
,, 26	$4\frac{1}{2}$	25	6	15	4	42	31	11		
,, 28	$4\frac{3}{4}$	28	16	12	– ?	45	32	13	Parr lines doubtful.	
July 4	$5\frac{1}{2}$	23	9	12	2	44	30	14		
,, 10	$4\frac{1}{4}$	23	9	11	3	43	30	13		
,, 14	$5\frac{3}{4}$	20	8	12	–	43	29	14		
,, ,,	7	24	9	12	3	47	32	15		
,, 16	$6\frac{1}{2}$	25	7	13	5	48	30	18		
Aug. 4	5	22	7	12	3	47	29	18		
,, 14	$3\frac{1}{2}$	24	10	11	3	45	31	14	Exterior ridges close.	
,, ,,	$6\frac{1}{2}$	22	8	12	2	47	29	18		
,, 17	$6\frac{1}{2}$	26	7	14	5	47	28	19		
, ,,	9	22	10	9	3	48	31	17	Ridges broad.	

From the marking we are sure that the fish in the above Table were smolts in the spring of 1905, and that they returned to the river as grilse in the summer of 1906, weighing from $2\frac{15}{16}$ lbs. in June to 9 lbs. and more in August. From the scales we learn that all the specimens were a little over two years old in the spring of 1905, when they were migrating as smolts; that all had spent one summer and one winter in the sea; and before returning had commenced the feeding of the second summer, which is represented by six lines in the June capture and by nineteen rather large lines in one of the August captures.

The number of lines fairly corresponds to those on the scales of grilse during the same months in 1903 and 1904,* if allowance be made for the heavier weights and larger number of specimens examined in these years.

(2) *Small Spring Salmon.* (Plate III.)

In reference to these salmon, perhaps it will be better to quote what I have previously written regarding them when describing their characteristics and scales:—

> "These small fish arrive in winter and spring, and the opinion "is prevalent that they went down as late smolts, and were not "ready to return with the grilse of the previous summer. They "weigh less than many of the August grilse; but, unlike them, "are not going to spawn until the following winter. Their parr "lines are generally well defined, and point to a more abrupt

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* *Twenty-third Report*, Part II., page 70.

> "transition from fresh to salt water than in some of the other "classes of fish. The later arrivals have the second annual ring in "course of formation, as shown by a narrowing of the interval "between the marginal lines, but the earlier fish have scales not "much different from those of grilse, and it is often difficult "to distinguish between them. The scale of the small fish does "not generally lie so flat as that of the grilse, and may exhibit "slight curves radiating from the centre to two or three points on "the anterior margin. The lines are puzzling, and suggest that "feeding has been interrupted during the second summer and "resumed in winter.
>
> "The majority of these fish seem never to have spawned, but "a few specimens may perhaps have been on the redds as small "grilse a year before."

I have already alluded to the smolts marked with a wire in 1905 which returned as grilse in 1906, and in February and March 1907 we have some of the same marking coming back as small spring fish. As these were all "wired" between 25th April and 6th June 1905 we have the time of their migration determined as approximately the same as that of the smolts of the "wired" grilse. If the former were any later it could only be by a few weeks, and we have to seek some other reason for the difference in habit. At the time of writing I have not been able to examine a sufficient number of their scales to say if there is any essential difference between them and grilse in the lines formed up to the time of migration; but there is a slight suggestion in the particulars given below that there may be such a difference, and in that case we shall have to look for the cause in the river and not in the sea. It is quite possible, however, that the variation referred to is purely accidental, as the specimens examined are so few in number.

Some "Wired" Smolts Recaptured as Small Spring Salmon.

Date.	Lbs.	NUMBER OF LINES ON SCALE.							Remarks.
		Up to Smolt Stage (River).				After Smolt Stage (Sea).			
		Total.	1st Year.	2nd Year.	3rd Year.	Total.	1st Year.	2nd Year.	
1907. Feb. 18	9½	22	12	10	?	55	28	27	Exterior ridges very broad. All marked with wire when migrating as smolts between 25th April and 6th June 1905.
,, 21	9	21	13	9	?	52	29	23	
Mar. 15	10¼	20	10	10	?	59	30	29	

An apparent break in the lines of the second summer is nearly always visible on the scales, and looks like a voluntary or compulsory diminution of feeding for some time. Another point seems evident from the marking, and that is that these small springers are returning for the first time, and have consequently never spawned. This corresponds with what the scales show, but it must be remembered that salmon similar in size and appearance that have spawned during the previous winter as small grilse are also caught at this season, and it is only by the spawning mark on the scales and sometimes maggots in the gills that the difference can be detected, though it sometimes becomes apparent when the fish comes to table.

These small unspawned fish constitute the bulk of the spring run in the northern rivers, and are comparatively more important to them than to the Tay, where larger fish a year or more older come in during the winter and spring.

III. Clean Salmon previously marked as Kelts. (Plates IV. and V.)

The Tay Salmon Fisheries Company are always ready to aid in any enquiry into the life-history of the salmon, and Mr. H. Robb (their secretary), who has made good progress with the study of scales, has kindly sent me from time to time those of marked fish recaptured in their nets during the past few years. Mr. J. B. Taylor and his friends on the Helmsdale have also been good enough to forward me scales of some recaptures on that river. These are all of interest, as the dates of marking in the kelt stage and of recapture in the clean condition are known, and serve as a useful check in the examination of the scales.

The principal argument against the utility of the scale theory seems to be that no actual proof has so far been adduced that salmon do not periodically shed their scales and replace them by others. Were this the case, it could hardly be expected that scales renewed from time to time would show the same indications on their surface as those that were of a more permanent nature, and consequently would be of small aid in tracing the previous career of a fish. In the *Twenty-third Report* I expressed the opinion that there was no periodic shedding of scales, and that any substitution was confined to the repair of damages. This was after noticing that the scales of all the marked fish examined showed lines corresponding to the age of the kelt at the time of marking, followed by the spawning mark or break in continuity of structure caused by injury to the edge of the scale during the spawning season, and around this again the new growth was added, the extent of the latter being regulated by the time the fish had remained in salt water before its return to the river and final recapture. The weak point was that the appearance of the scale in the kelt stage could only be arrived at by analogy, and that was hardly convincing.

This difficulty has now been surmounted, as five of the recaptured clean fish had previously passed through my hands when marked as kelts and I had preserved some of their scales. Thus we are able to compare scales taken from the same fish at two different periods of its life, viz. (1) after spawning for the first time, and (2) after return from the sea preparatory to a second spawning.

The particulars of marking and recapture of these five fish are given :—

No.	Lbs.	Condition.	Sex.	Date.	Where Caught.
1180B	5 14	Kelt. Clean	F.	Marked 12th December 1904. Recaptured 30th April 1906.	Helmsdale (net). ,, (rod).
7780A	12½ 24$\frac{3}{16}$	Kelt. Clean.	F.	Marked 19th January 1906. Recaptured 25th July 1906.	Tay (rod). ,, (net).
9194A	5½ 11½	Kelt. Clean.	F.	Marked 11th April 1906. Recaptured 9th August 1906.	,, (rod). ,, (net).
9341A	3 11	Kelt. Clean.	F.	Marked 31st January 1906. Recaptured 27th April 1907.	,, (rod). ,, (net).
9342A	4 12	Kelt. Clean.	F.	Marked 31st January 1906. Recaptured 13th April 1907.	,, (rod). ,, (net).

No. 9194 had been previously marked as a 6-lb. kelt on the 20th January, when it weighed 6 lbs., so that its long delay in the river was accompanied by a reduction in weight.

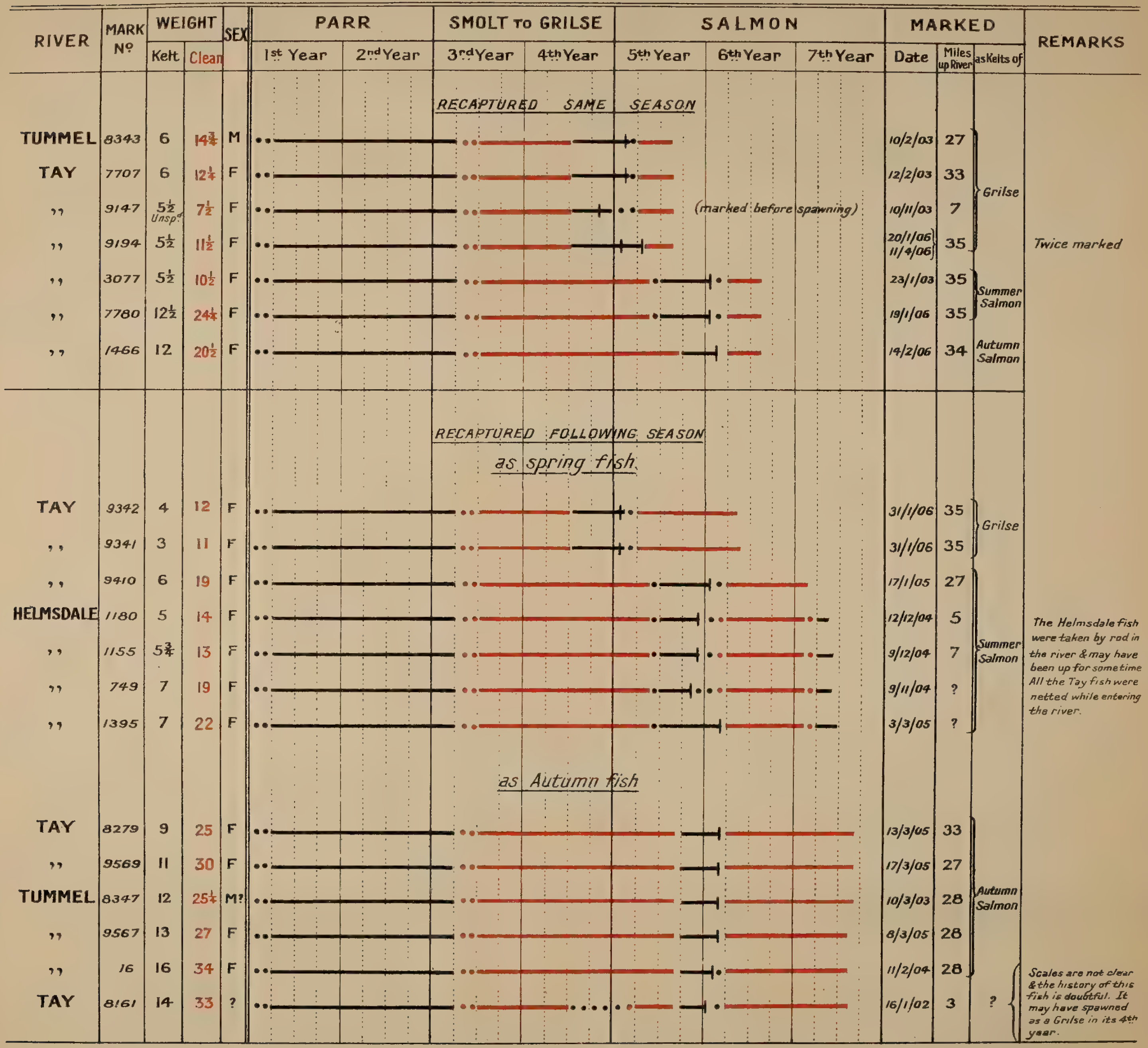
In each of these cases we find that the scale of the clean fish is, in all essential details, a copy of that taken in the kelt stage, with the addition round the periphery of the new growth formed in the sea after marking, and before recapture on the return of the fish to the river. It will be seen from the photographs (Plates IV. and V.) that the junction of the old and new material is distinct and the intervening superficial suture (spawning mark) clearly visible. This is strong evidence that these salmon had not shed their scales between the dates of marking and recapture, which, in the case of the Helmsdale fish (No. 1180), was about 16½ months. We may, however, trace the history of this last fish a little further back so as to find out the approximate time it had spent in the river before it was marked, and the lines on its scales denote that after migrating as a two-year-old smolt, it had remained a little more than the same time in the sea and had there begun the feeding of a third summer, which is represented by some six or seven lines, corresponding to what we find in salmon returning in May or June when about 4¼ to 4½ years old. I do not suppose that anyone will allege that there is any shedding and renewal of scales in the river, and it does not seem to be unduly straining the point to say that this salmon had not shed its scales during the period of nearly two years, commencing with its entry to the river in May or June 1904 and terminating on 30th April 1906, when it was killed as a spring fish.

The intervals between marking and recapture in the cases of two Tay fish (Nos. 7780 and 9194) are much shorter, but these were both kelts that returned in the autumn of the same season. No. 7780 was marked in January 1906 as the kelt of a summer fish that had apparently entered the river in May or June 1906, and, notwithstanding its weight (12½ lbs.), the scale shows it was then the same age as the 5-lb. Helmsdale kelt (No. 1180), both being 4¼–4½ years old. While the latter took 16½ months to put on 9 lbs., the larger Tay fish gained nearly 11¾ lbs. in 6¼ months, and this is the greatest increase any of our Tay recaptures exhibit in such a brief interval. It must be noted, however, that in January 1906 the Tay was comparatively high and its temperature warm, and these conditions were favourable for a rapid journey to the sea. The lines added on the scale indicate that there was little delay in the river, as immediately surrounding the spawning mark they are narrow and close together and resemble the annual ring which seems to occur in early spring, while the later growth is denoted by unusually broad and widely-spaced lines, showing generous feeding. No. 9194 was a grilse kelt, and, unlike other grilse, seemed in no hurry to leave the upper waters. After being marked for the second time it probably made a quick descent, and four months later, when taken in the nets, it weighed 11½ lbs. Nos. 9341 and 9342 are instances of grilse kelts returning 14½ and 15 months after they were marked, as spring salmon.

Instead of giving details of the marked fish of which scales were sent to me, I have prepared a diagram showing their life-history as deduced from the scales, and also what we know from the particulars of marking. All the Tay recaptures were made in July and August of either the same or the following year, with the exception of one made in March, and two made in April, and it is unfortunate that spring fish should be so poorly represented in the list, as it is of importance to find out which class of spawners come

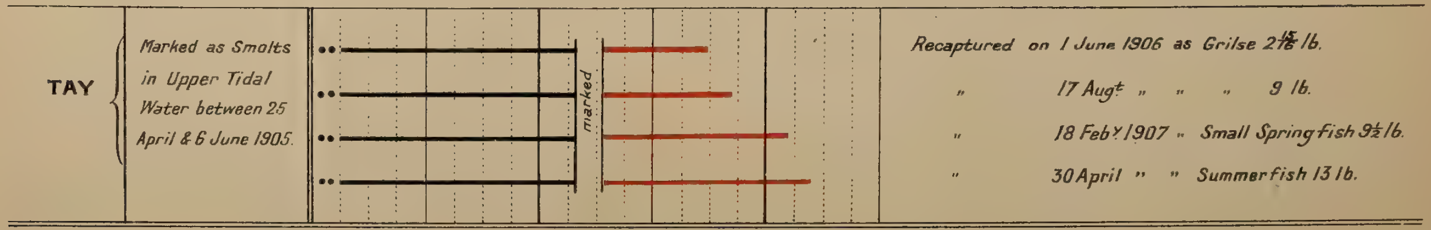
CLEAN SALMON PREVIOUSLY MARKED AS KELTS.

Diagram based on the Scales, showing estimated periods spent in the River (black) and in the Sea (red) with date of Marking denoted by ⊣, and of Recapture by termination of line.



RIVER	MARK No	WEIGHT Kelt	WEIGHT Clean	SEX	MARKED Date	MARKED Miles up River	MARKED as Kelts of	REMARKS
RECAPTURED SAME SEASON								
TUMMEL	8343	6	14¾	M	10/2/03	27	Grilse	
TAY	7707	6	12¼	F	12/2/03	33		
,,	9147	5½ Unspd	7½	F	10/11/03	7		
,,	9194	5½	11½	F	20/1/06 11/4/06	35		Twice marked
,,	3077	5½	10½	F	23/1/03	35	Summer Salmon	
,,	7780	12½	24¼	F	19/1/06	35		
,,	1466	12	20½	F	14/2/06	34	Autumn Salmon	
RECAPTURED FOLLOWING SEASON as spring fish								
TAY	9342	4	12	F	31/1/06	35	Grilse	
,,	9341	3	11	F	31/1/06	35		
,,	9410	6	19	F	17/1/05	27	Summer Salmon	
HELMSDALE	1180	5	14	F	12/12/04	5		The Helmsdale fish were taken by rod in the river & may have been up for sometime All the Tay fish were netted while entering the river.
,,	1155	5¾	13	F	9/12/04	7		
,,	749	7	19	F	9/11/04	?		
,,	1395	7	22	F	3/3/05	?		
as Autumn fish								
TAY	8279	9	25	F	13/3/05	33	Autumn Salmon	
,,	9569	11	30	F	17/3/05	27		
TUMMEL	8347	12	25¼	M?	10/3/03	28		
,,	9567	13	27	F	8/3/05	28		
,,	16	16	34	F	11/2/04	28		
TAY	8161	14	33	?	16/1/02	3	?	Scales are not clear & the history of this fish is doubtful. It may have spawned as a Grilse in its 4th year.

EXAMPLES OF WIRED SMOLTS.



TAY Marked as Smolts in Upper Tidal Water between 25 April & 6 June 1905.

Recaptured on 1 June 1906 as Grilse 2 15/16 lb.
" 17 Augt " " " 9 lb.
" 18 Feby 1907 " Small Spring fish 9½ lb.
" 30 April " " Summer fish 13 lb.

back at this season, and, along with fish which have never been in the river before, form the valuable runs of winter and spring. The March capture had previously spawned as a young summer fish of the same age as the Helmsdale salmon, which also returned in spring, though, as there are no nets on that well-managed river to catch them, they did not succumb to the rod till a little later on in the season.

I have allowed about two years as the usual time spent in the river up to the smolt stage, as this in all the cases seems approximately correct, and it is unnecessary for the present purpose to go into more exact detail. The date of return of the salmon from the sea is estimated from the number of lines put on since the last winter ring, the number of these rings tell us how long it had been in the sea, and the date of marking is known. There is, however, nothing to guide us as to when the kelt left the river, and so this can only be guessed at in most cases.

For purposes of comparison I add to the diagram examples of typical specimens of the grilse and small spring fish which were marked as smolts. The latter are a year younger than those of the ordinary and larger spring salmon which are returning to the Tay for the first time, and two years younger than the ones that have come up at a junior age and spawned once.

The diagram does not include examples of nearly all the different classes of kelts that return as clean fish, and I do not propose to base much on it. The similarity of the kelts of autumn fish from the upper water that came back about eighteen months after marking is noteworthy. They were all of good size, marked late in the winter and at some distance from the sea, none of them having previously spawned, as far as I can judge, and they were captured in July and August of the following year. We must remember that the Tay nets come off on 20th August, and after that date there is little chance of marked fish being intercepted, though doubtless many of them enter the river, and hence the percentage of recaptures is rather disappointing.

All these marked fish show the spawning mark on their scales, and many of them had the distinctive spots and gill maggots which are characteristic of the salmon, to which the local name of bull trout* is given. The only case in which the spawning mark, though apparent, was not very distinct was No. 1395 (Helmsdale), and this fish was judged by its appearance to have been a long time in fresh water. When we find that the spawning mark remains for at least two seasons and is observed on the scales of all the marked fish examined, while there is no sign of it, or of a shortened period of sea-feeding, on the scales of many other salmon, it is not unreasonable to conclude that the latter have not spawned during that time. The first period in the salmon's life after it returns to the river at which it spawns is the grilse stage in its fourth year. Many of the Tay salmon, one and even two years older, have no indication of a previous spawning on their scales, and have perhaps spent three years in the sea. They are younger, but, owing to continuous feeding, may be heavier than some fish of similar appearance returning at the same time on their second visit to the spawning beds. In seasons when both the maiden fish and previous spawners come back freely we have a good supply of salmon. If a poor spawning season, or subsequent causes in the sea interfere with the usual crop of maiden fish, we have to depend largely on the return of the spawners of a year or two before, or *vice versa*, and in such years fish may be scarce.

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* "The Bull Trout of the Tay and of Tweed," by W. L. Calderwood. *Proceedings Royal Society, Edin.*, Vol. XXV., Part I.

DESCRIPTION OF PLATES.

PLATE I.

Scales of Parr and Smolts. Magnification × 22.

Fig.		Age about — Years.		Size. Cm.	Captured.	Remarks.
1	Parr.	1	Estimated.	6·8	May 1905, tidal water.	Growth larger on posterior area.
2	Smolt.	2		13·8	May 1904, tidal water.	Lines of third summer forming.
3	Parr.	1½		11·6	July 1905, Upper Tay.	Probably hatched early.
4	Smolt.	2		16·3	April 1906, tidal water.	
5	Parr.	1	Actual.	9·4	Mar. 1907 Stormontfield ponds.	Parr and scale comparatively large.
6	Smolt.	2		16·1	,, 1906	Wide lines of second summer distinct.

PLATE II.

Scales of "wired" grilse which had been marked when migrating as smolts in 1905 and were recaptured in the summer of 1906.

Fig. 1. Scale of a 2$\frac{15}{16}$-lb. grilse caught 1st June 1906, showing feeding in the sea during a summer, winter, and early part of a second summer.

Fig. 2. Scale of a 9-lb. grilse caught 17th August 1906. This grilse had remained longer in the sea, and the additional growth is represented by the increase in the number of lines exterior to the annual ring, all of which were formed in its second summer.

PLATE III.

Fig. 1. Scale of a 9½-lb. small spring salmon which had been marked when migrating as a smolt in 1905, and was recaptured on 18th February 1907 when perhaps six months older than the August grilse of nearly the same weight (Plate II., fig. 2). The second annual ring is seen on the margin of the scale, where it surrounds the wider ridges of the second summer. These ridges are numerous but rather irregular in formation, and suggest that there is some difference in the feeding habits of small spring fish and grilse.

PLATE IV.

Scales of marked fish (No. 9194 Tay) subsequently recaptured.

Fig. 1. Scale of 5½-lb. grilse kelt taken on 11th April 1906, showing one annual ring followed by the lines of the second summer.

Fig. 2. Scale of the same fish when recaptured as an 11½-lb. clean salmon on 9th August 1906. The new growth put on in the sea after the kelt stage completely surrounds the older material, and the junction is denoted by an irregular fissure (spawning mark).

In comparing scales taken at different times from the same fish it must be remembered that it is almost impossible to get two that are exactly identical in formation, and there may be some slight differences in minor details.

PLATE V.

Scales of marked fish (No. 1180, Helmsdale) subsequently recaptured.

Fig. 1. Scale of 5-lb. kelt taken on 12th December 1904. Two annual rings are followed by a few lines of a third summer which correspond in number to what we find in fish entering the river in May or June, so that this kelt had probably been in fresh water for perhaps six months before it was marked.

Fig. 2. Scale of the same fish when recaptured as a 14-lb. clean spring salmon on 30th April 1906. The new growth is added round the circumference of the kelt scale, and its ridges are at first widely apart as a result of summer feeding, while the more exterior lines are contracted towards the margin of the scale and form a winter ring. The spawning mark is apparent all round, but in a thick scale photography does not bring it out so clearly as in a thinner one.

Note.—In Plates II., III., IV., V. the magnification is × 15. The vertical lines opposite the figures indicate the extent of the growth of the anterior area of the scale. The annual rings which occur towards the end of winter and approximately mark the completion of a year in salt water, are indicated. There is no increase in the area of the scale of the salmon while in the river, and therefore no annual ring is formed during a winter when a fish is spawning, though there may be slight traces of it on the scales of fish that have descended as very early kelts.

PLATE I.

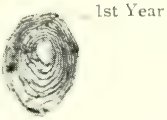

Fig. 1.

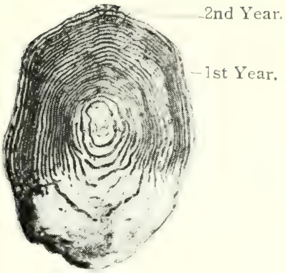

Fig. 2.

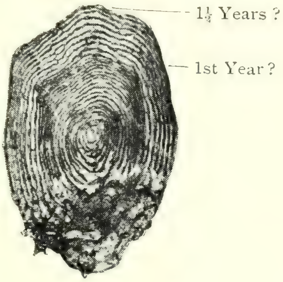

Fig. 3.

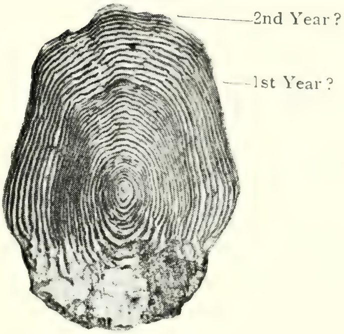

Fig 4

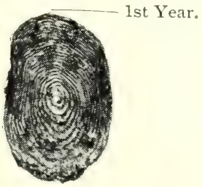

Fig. 5.

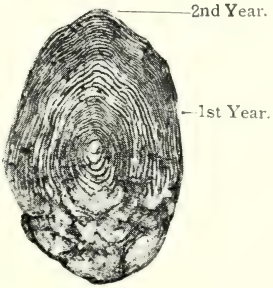

Fig. 6.

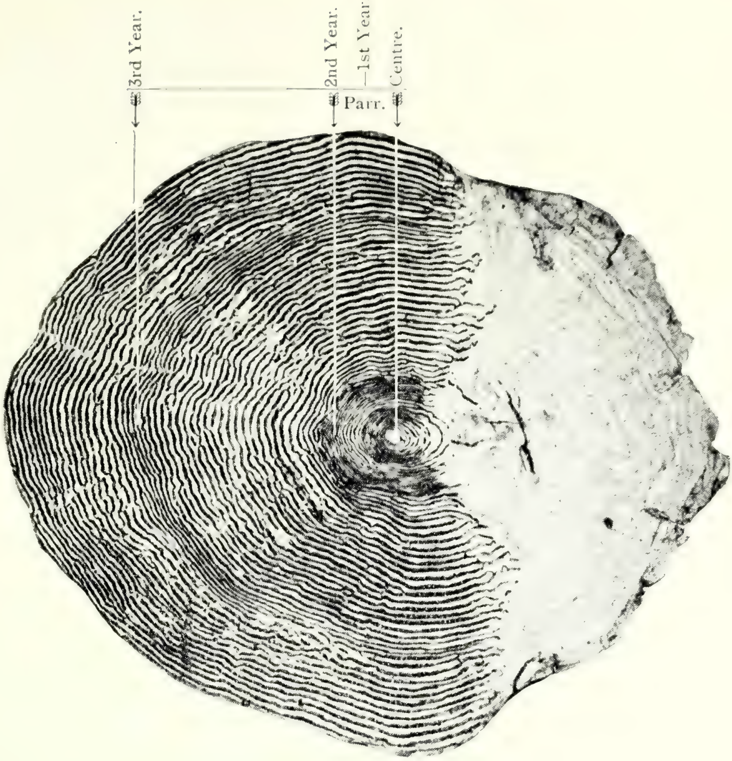
3rd Year.
2nd Year.
—1st Year.
Centre.
Parr.

Fig. 2.

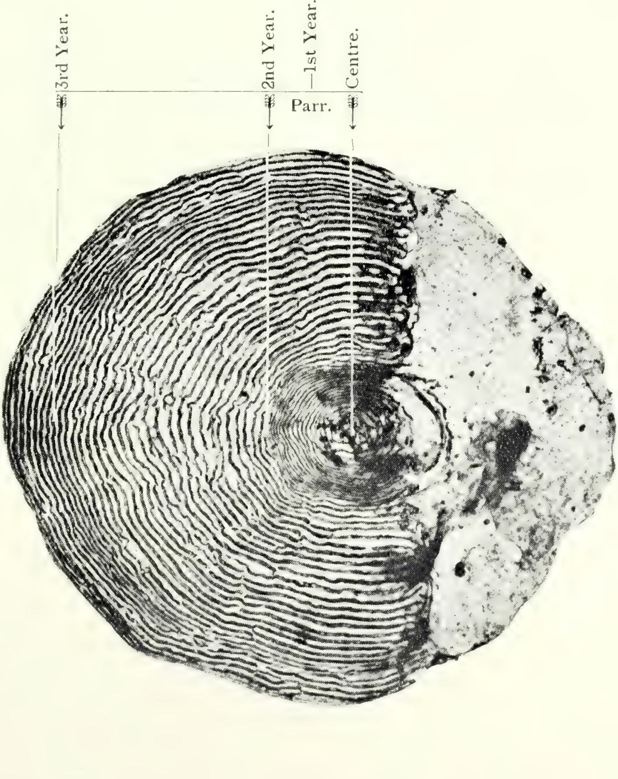
3rd Year.
2nd Year.
—1st Year.
Centre.
Parr.

Fig. 1.

PLATE III.

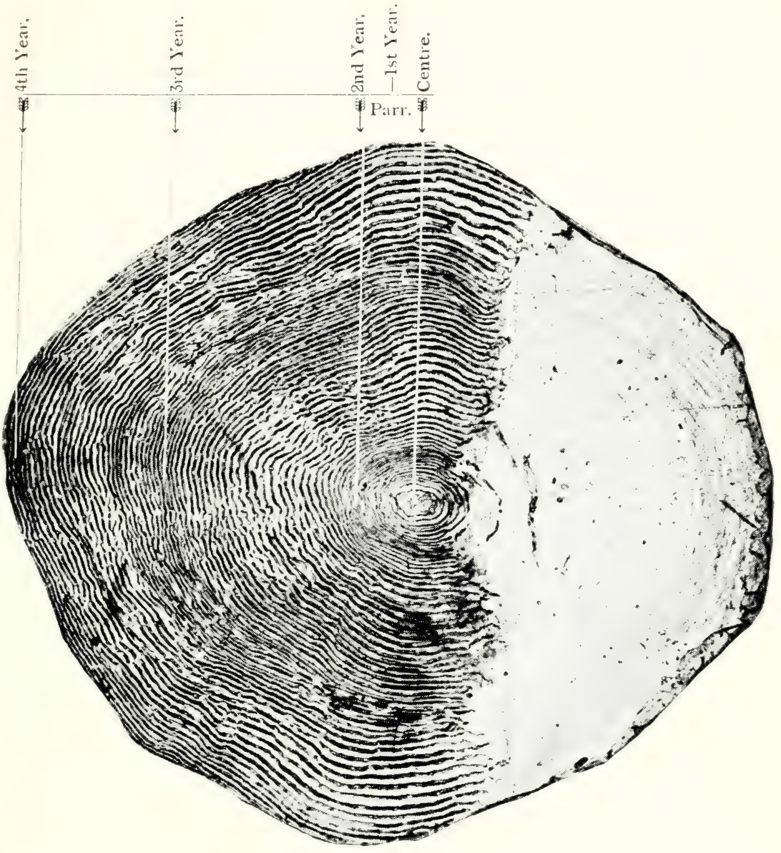

PLATE IV

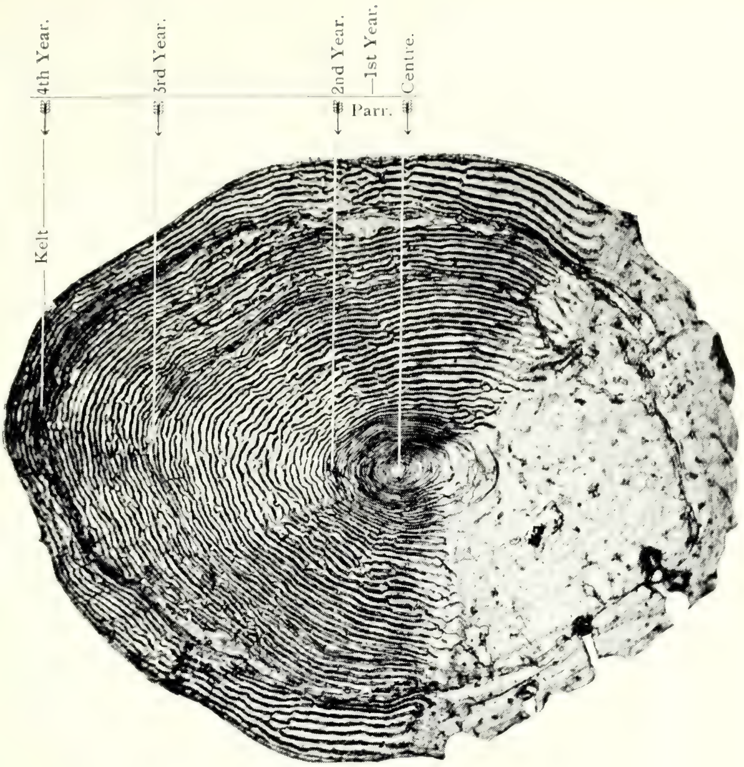

Fig. 2.

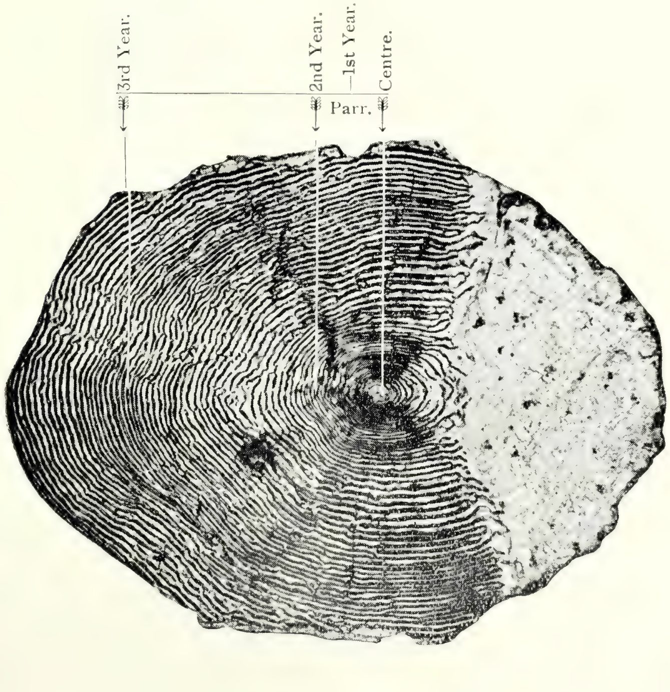

Fig. 1.

PLATE V.

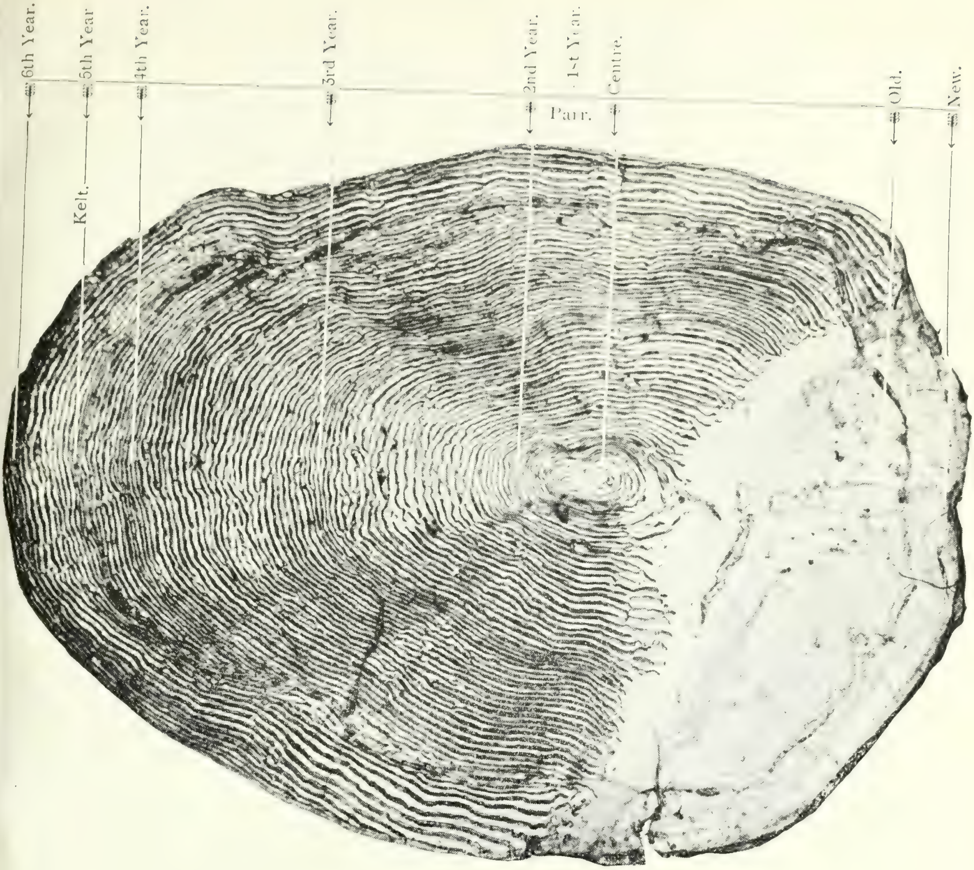

Fig. 2.

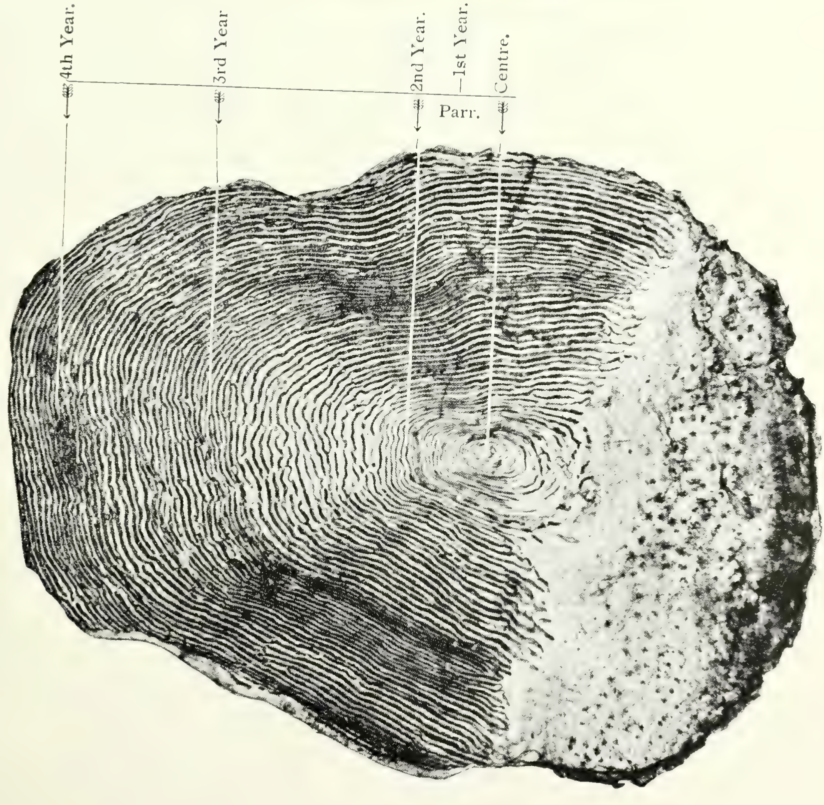

Fig. 1.

APPENDIX III.

TABLE SHOWING THE EXTENT OF NET AND COBLE FISHING IN SCOTLAND IN 1907, EXCLUSIVE OF THE FEW SEA FISHINGS CARRIED ON BY THIS METHOD.

Note.—For a list of proprietors who hold such fishings, and for the tenants or occupiers of them in 1904-1905, reference may be made to the *Twenty-second Annual Report,* Part II., Appendix I.

River District.	Number of Shots Regularly Fished.	Mileage of Water Fished.	Remarks.
Tweed, - - -	62	16	Berwick up to Coldstream.
Forth, - - -	37	16	There are 63 hauling grounds available. Alloa to Craigforth.
Tay, - - - -	40	33	Linn of Campsie to Broughty Ferry; 27 miles in tidal waters.
North Esk, - -	19	5	
Dee (Aberdeen), -	5	3	
Don, - - - -	3	4½	
Ythan, - - -	1	..	At mouth of river.
Deveron, - - -	All available pools 4 cobles worked.	3	This netting is to cease at the close of season 1907.
Spey, - - -	4 cobles worked; shots not defined.	3	
Findhorn, - - -	16 (10 in river)	5 (3 in river).	The rest in estuary.
Beauly, - - -	6	2	Fishing only carried on once or twice a week during grilse run.
Conon, - - -	27	3¼	7 other shots occasionally fished.
Alness, - - -	3	..	Mouth of river; 5 other nets are fished in the sea.
Kyle of Sutherland, -	2	½	

APPENDIX III.—*Continued.*

River District.	Number of Shots Regularly Fished.	Mileage of Water Fished.	Remarks.
Fleet, - - -	1	. .	
Brora, - - -	4	4	
Forss, - - -	1	. .	Mouth of river.
Halladale, - - -	1	. .	Inside mouth of river.
Naver, - - -	2	$\frac{1}{2}$	
Borgie, - - -	1	. .	Outside mouth of river.
Lochy, - - -	2	. .	In estuary, distant from river mouth.
Awe, - - -	7 (3 in river).	$\frac{1}{2}$–1	2 other shots occasionally fished.
Eckaig, - - -	2	. .	Inside mouth of river; Loch Eck occasionally fished.
Clyde and Leven, -	7 (5 at intervals.)	$\frac{3}{4}$	The 2 regular shots are below Leven mouth in Clyde; 5 shots occasionally in Loch Lomond.
Doon, - - -	1	. .	In upper waters, during spring months.
Bladenoch, - -	2	$\frac{1}{2}$	Three miles up river.
Cree, - - -	18	7	In tidal waters of river.
Dee (Solway), - -	3	. .	In tidal waters; 2 other shots occasionally fished in upper waters.
Nith, - - -	9	7	5 other shots fished occasionally in tidal waters; 3 other shots in upper waters fished occasionally.
Totals (29) -	290	115	

APPENDIX IV.

SALMON-MARKING RESULTS.

[FOURTH PAPER.]

BY

W. L. CALDERWOOD,

Inspector of Salmon Fisheries for Scotland.

Since making my last year's report on this subject thirty-one salmon and four sea trout recaptures have been secured. Before, however, referring to the details of those recaptures I desire to mention the occurrence of two rather peculiar circumstances, and to refer to the particular information respecting the life-history of the salmon which, in the annals of salmon-marking, makes the past twelve months memorable.

Those who are acquainted with the history of salmon-marking are aware that the late Duke of Atholl attached copper discs to the tails of many Tay fish about 50 years ago. A very few recaptures were obtained and were mentioned in the historical summary which I gave in my first paper on the results of salmon-marking [*Twentieth Annual Report*, Part II., Appendix II.]. Last summer I received as a present from Mr. Douglas Johnston, Montrose, one of those old Tay marks. It had long been in the possession of the late Mr. James Johnston, and after his death was kindly sent to me. It is now in the possession of the present Duke of Atholl, who informs me that another mark of this series was dug up in a garden in the north of England—probably dropped there at an earlier date by some Tayside gardener. The fish was marked at Dunkeld on 30th March 1863: a kelt 5½ lbs. in weight and 28 inches in length. It was recaptured at the Rossie fishings of Messrs. Johnston, in Montrose basin, on 17th July 1863, *i.e.*, the same year as that in which it was marked. In the note accompanying the mark, and written at the time the recapture was made, the fish is described as a lanky male "bull trout" of 7 lbs. The fact that it was regarded as a bull trout bears out the view that these so-called Tay bull trout (which are really salmon) exhibit their spotted appearance and have their gill maggots because they have, after only a short interval in the sea, entered estuarial water before entirely changing from the spotted kelt appearance to the silvery sheen of the clean fish.

The other peculiar circumstance to which I may refer occurred at Grimersta, in the island of Lewis. I have supplied marks on one or two occasions to those who fished the Grimersta and to Mr. Pople's head keeper there—John Mackay. Other marks were made privately, of the same pattern as those supplied to the Fishery Board, to the order of Mr. Byres-Leake. These were distinguished by the letters "J. B.-L."

On 10th April 1903 a 5-lb. kelt was marked "J. B.-L., 30." Last November I received a letter from John Mackay in which he informed me that a cow of his had died, and that, being unable to account for the animal's death, he made a *post-mortem* examination, and found in the interior of the cow this particular salmon mark, which he considers caused the animal's death. The most likely explanation of how the mark came to be inside the cow seems to be that the marked fish had died and been washed up on the bank of the river in time of flood. That the cow, which commonly grazed on the banks of the Grimersta, had eaten the dead fish with the mark. It seems that cows will readily acquire the habit of eating fish, and one gentleman who has fished the Grimersta has stated that he commonly used to give one of the Grimersta cows sea trout which he did not want, and that the cow ate the fish readily. Unfortunately, we do not know how long the mark had been inside the cow. The interval of time between marking and the recovery of the mark is three years and seven months—a longer interval than, under normal circumstances, we have yet observed. The incident is analagous to the finding of an American coin inside a stag shot by a friend of my own in the island of Mull.

The information of outstanding importance has been obtained through the extensive marking of smolts undertaken in 1905 by the Tay Salmon Fisheries Co. In a paper read before the Royal Society of Edinburgh [*Proc. Roy. Soc. Ed.*, XXVI., Part V., p. 321] last July, I have already shown, first, that no grilse marked as the smolts were marked, *i.e.*, by the insertion of a small loop of silver wire in the dorsal fin, was captured in 1905, but that a number of grilse so marked were captured in the summer and autumn of 1906, thus most definitely confirming the view that the smolt, going to the sea in April or May, does not return as a grilse to fresh water towards the end of the same season, but appears as a grilse during the summer and autumn of the succeeding year. This was the accepted view in many districts, but in some localities, including the Tay itself, the belief that two or three months in the sea were sufficient to change a smolt into a grilse obtained. This view was, no doubt, accepted owing to the deductions from the famous Stormontfield experiments. It has elsewhere been stated that "from other observations it seems certain that all grilse do not, however, enter fresh water, "but that many fish pass the grilse stage in the sea and return for the "first time to fresh water as small spring salmon, four years of age."

In the spring of the present year this view is being definitely confirmed by the capture of small spring fish in the Tay bearing the distinctive silver wire inserted by Mr. M'Nicol, of the Tay Fisheries Co., in 1905. The occurrence of the first of those small spring fish has already been noted in *The Field* by Mr. P. D. Malloch.

It is thus seen that the dual habit of migration, specially dealt with in the *Twenty-second Annual Report*, subsists from the smolt stage onwards. At the same time, the uncertainty as to the presence of small spring salmon and similarly-sized grilse occurring at different seasons is explained, while by the marking of adult fish we have already accounted for the presence of the large class of Tay springers.

So far, therefore, as the rivers of the east coast of Scotland are concerned, the leading features of the salmon's migratory habits have been to some extent elucidated by the continued marking of fish.

With regard now to the particular recaptures which have been secured since my last report, the following is the list, first, of marked kelts recaptured as clean fish, the records being separated into short-time and long-time migrations.

KELT—CLEAN.

SHORT-TIME MIGRATIONS.

No.	Weight.	Length.	Condition.	Sex.	Date.	Where caught.	Remarks.
	lbs.	inches.					
1994	9	34	Kelt.	M.	31 Mar. 1906.	Naver (Syre).	
	16½	36	Clean.		11 July 1906.	Borgie mouth.	
1589	6½	27	Kelt.	F.	13 Nov. 1905.	Helmsdale R.	
	8·10	29	Clean.		10 July 1906.	Rockfield, Portmahomack.	Coast nets ; S. of Tarbat Ness.
1148	7½	30	Kelt.	F.	11 Nov. 1905.	Helmsdale.	
	11	34	Clean.		14 July 1906.	Rockfield, Portmahomack.	
2041	8	28	Kelt.	M.	28 Mar. 1906.	Naver R.	
	9	31	Clean		14 July 1906.	Borgie mouth.	Condition very poor.
2013	7	28	Kelt.	F.	9 Mar. 1906.	Naver R.	
	14	33½	Clean.		17 July 1906.	Naver R. mouth.	
7780	12½	35	Kelt.	F.	19 Jan. 1906.	Tay, Edradynate.	
	24·3	38¾	Clean.		25 July 1906.	Tay estuary.	
9194	5½	27	Kelt.	...	11 April 1906.	Tay, Edradynate.	
	11½	31	Clean.		9 Aug. 1906.	Tay estuary.	A bull trout. Marked first as kelt on 20th Jan. 1906, at Findynate, No. 9333. On 11th April mark changed to above.
*1466	12	35	Kelt.	F.	14 Feb. 1906.	Tay, Cloichfoldich.	
	20½	36¾	Clean.		4 Aug. 1906.	Tay estuary.	

* The weight and length on recapture are open to some slight uncertainty.

[Table.

KELT—CLEAN

LONG-TIME MIGRATIONS.

No.	Weight.	Length.	Condition.	Sex.	Date.	Where caught.	Remarks.
	lbs.	inches.					
1155	5¾	28¾	Kelt.	F.	9 Dec. 1904.	Helmsdale R.	
	13	34	Clean.		21 May 1906.	Helmsdale R.	
821	9	30	Kelt.	F.	9 Nov. 1904.	Helmsdale R.	
	16	33½	Clean.		16 May 1906.	Helmsdale R.	
1395	7	30	Kelt.	F.	3 Mar. 1905.	Helmsdale R.	
	22	36	Clean.		26 June 1906.	Helmsdale R.	Had been in river some time.
9567	13	35	Kelt.	M.	8 Mar. 1905.	Tay (Tummel).	
	27	42	Clean.		21 July 1906.	Tay estuary.	A "bull trout."
8279	9	34	Kelt.	F.	13 Mar. 1905.	Tay, Findynate.	
	25	...	Clean.		13 Aug. 1906.	Tay estuary.	
1396	6	26	Kelt.	F.	3 Mar. 1905.	Helmsdale R.	
	13½	35¾	Clean.		28 Sept. 1906.	Helmsdale R.	
1101	8¾	32¼	Kelt.	F.	13 Dec. 1904.	Helmsdale R.	May have been in river in interval.
	12½	35	Clean.		28 Sept. 1906.	Helmsdale R.	
616	10½	29	Kelt.	...	Feb. 1905.	Helmsdale R.	May have been in river in interval.
	15½	34	Clean.		27 Sept. 1906.	Helmsdale R.	
9569	11	34	Kelt.	F.	17 Mar. 1905.	Tay, East Haugh.	
	30	42	Clean.		14 Aug. 1906.	Tay estuary.	
1121	7½	30½	Kelt.	F.	11 Nov. 1905.	Helmsdale R.	
	17	—	Clean.		9 April 1907.	Helmsdale R.	
9341	3	24	Kelt.	F.	31 Jan. 1906.	Tay, Edradynate.	
	11	32	Clean.		27 April 1907.	Tay estuary.	
9342	4	25	Kelt.	F.	31 Jan. 1906.	Tay, Edradynate.	
	12	33½	Clean.		13 April 1907.	Tay estuary.	
1665	7	30	Kelt.	...	Mar. 1906.	Helmsdale R.	
	16½	36	Clean.		25 April 1907.	Portmahomack.	Coast net S. of Tarbet Ness.
1149	13½	33	Kelt.	F.	11 Nov. 1905.	Helmsdale R.	
	19½	37	Clean.		30 April 1907.	Helmsdale R.	
1626	4	23½	Kelt.	M.	13 Nov. 1905.	Helmsdale R.	
	11	30	Clean.		6 May 1907.	Helmsdale R.	
1146	7	29½	Kelt.	F.	11 Nov. 1905.	Helmsdale R.	
	14½	35	Clean.		15 May 1907.	Helmsdale R.	
9332	11	34	Kelt.	F.	16 Jan. 1906.	Tay, Edradynate.	
	23½	40¼	Clean.		18 May 1907.	Tay estuary	

The average interval between marking and recapture is, for the short-time migration 162 days, or say 5½ months; for the long-time migration 519 days, or 17 months. There are eight short-time recaptures and seventeen long-time recaptures. The shortest interval is 102 days, the longest 655 days.

With regard to increase of weight, it is noticeable that, although three different river systems are represented in the above returns, viz., the Helmsdale, Naver, and Tay, the average increase of the long-time series is just double the average increase of the short-time series, a result exactly similar to that noted in last year's report when dealing with Tay returns alone. The same great extremes are again noticeable in the long-period fish. The greatest increase is 19 lbs., in a Tay fish, in 535 days. The least increase is 3¾ lbs. in a Helmsdale fish, which, curiously enough, has the longest interval of time, viz., 664. The explanation may be this, that the latter fish has been up a river and spawned in the interval, and is not therefore a proper long migration at all, while the former has continued to put on weight in the sea.

Three of the recaptures have been made on the coast, and are exactly similar to certain recaptures noted on the chart of coastal movements published last year—Helmsdale to Portmahomack, south of Tarbat Ness.

Ascending Clean Fish.

Four clean fish marked in the Dee were recaptured. In each case loss of weight is noticeable.

No.	Lbs.	Inches.	Condition.	Date.	District.
1884	8¾ 8	27 —	Clean. Clean.	16th February 1906. 16th May 1906.	Durris. Banchory.
1851	7½ 7	26¼ —	Clean. Clean.	15th December 1905. 21st May 1906.	Crathes. Crathes, in a lower pool.
1886	7¼ 6½	27¼ —	Clean. Clean.	16th December 1905. 16th August 1906.	Floating Bank. Invercauld.
1902	8 6½	26 26¼	Clean. Clean.	18th December 1905. 4th September 1906.	Donald's Garth. 700 yards up Cluny.

Two similar returns respecting fish of the same series, which had been recaptured after shorter intervals, were included in last year's report. One fish from Culter had ascended 28 miles to Glentana. The other had remained in the lower water and was recaptured at Culter.

An ascending Beauly fish, No. 3008, has also been recaptured after a short interval.

[Table.

Sea Trout.

A few interesting recaptures of sea trout have been made.

No.	Lbs.	Inches.	Condition.	Sex.	Date.	Where Caught.
326	2¾	22	Kelt.	F.	11th October 1904.	Luss Water.
	4	21	Clean.	F.	12th July 1906.	Clyde, at Leven mouth ; in very poor condition.
340	1½	16½	Kelt.	M.	24th October 1904.	Luss Water.
	3·2	20½	Unspent.	M.	17th October 1906.	Luss Water.
336	2	20	Kelt.	F.	21st October 1904.	Luss Water.
	3¾	22	Clean.	F.	21st August 1906.	Loch Lomond.

The fish were marked after being stripped for the hatchery of the Loch Lomond Angling Association.

Finnock to Sea Trout.

It will be in the recollection of some that an argument arose some years ago in the Sheriff Court in Aberdeen as to whether or not finnock, which are abundant in the Dee and neighbouring rivers, are the young of the sea trout. I supplied a number of short lengths of silver wire which I had prepared for smolt-marking in the early experiments in the Tay, but which had proved to be too heavy for smolts, to Mr. Mackay, an Aberdeen angler, who kindly volunteered to distribute the wires amongst local finnock anglers. One recapture has been reported and seems to me to offer good proof of the assertion that the finnock is the young of the sea trout.

The finnock in question was estimated, from an average of 20 finnock kelts marked by Mr. James Meff, to be ½ lb. in weight. These 20 finnocks were marked during April and May 1906. Individual wires were not distinguishable. The particulars of marking and recapture are:—

½lb. : kelt : April or May 1906 : Lower Dee : finnock.
2¼lbs. : clean : 14 July 1906 : Lower Dee : a sea trout.

The sea trout was captured in one of the sweep nets of the Aberdeen Harbour Commissioners, and is described in the letter to me from Mr. Mackay as "a beautifully-shaped trout."

APPENDIX V.

EXPERIMENT TO TEST THE LENGTH OF TIME SEA-LICE REMAIN ATTACHED TO SALMON IN FRESH WATER.

When a salmon is captured in fresh water and is found to have attached to it the marine crustacean ectoparasites, commonly called sea-lice or tide-lice (*Lepeoptheirus Stromii* (Baird)), the salmon is, with reason, regarded as having recently left the sea. When, therefore, a salmon is caught in the upper waters of any of our rivers, with sea-lice attached, the ascent from the sea is considered to have been rapid. Salmon with sea-lice have, I understand, been taken in the upper waters of the Tay, in the Tummel, and even in the Garry and Lyon. In like manner sea-lice have been noticed on fish taken in the Moriston and Oich, above Loch Ness. It appears, however, that while, as we know, spring fish run slowly in cold water, and summer fish run rapidly in warmer water, some confusion is likely to occur if we apply the sea-lice test to either class of fish indiscriminately when estimating the rate of ascent. And further, it is more than probable that in cold water the sea-lice remain attached to the fish longer than they do in warm water. I have been informed, for instance, on good authority, that in the cold rivers of Lapland sea-lice are found on fish which have ascended certainly several days' journey from the sea.

It seemed desirable, therefore, to ascertain by actual experiment the time the parasites remained attached to salmon placed under observation in a tank containing water which was gradually changed from salt to fresh. The fact that the fish experimented with were in confinement in comparatively still water no doubt detracts somewhat from the value of the observations, but this drawback was inevitable. Through the kindness of Dr. Fulton, arrangements were made at the Board's Marine Laboratory at the Bay of Nigg, near Aberdeen, for carrying out the experiments, and the actual observations were made by Dr. Williamson. As the experiment was conducted in summer it must be regarded as a guide during summer temperatures only.

I am indebted to Dr. Fulton for the following notes on the experiment:—

The tank in which the experiment was made had the following dimensions:—Length, 5 feet 6 inches; breadth, 4 feet 4 inches; height, 3 feet 6 inches. The height of water was about 28 inches; the bottom of the tank was painted white, and the plate-glass front was covered up with canvas. The top was left uncovered, and a considerable amount of light reached the water.

Two grilse were obtained from a bag net in the Bay of Nigg on 2nd July; they were both in good condition, one weighing 4 lbs. and the other 5 lbs. approximately. Each fish had attached to it a number of sea-lice. They were put together into the tank described, which contained sea water, on the morning of the day mentioned at 10.30. The specific gravity of the water was 27·6° F., and the temperature 52·9° F. (11·6° C.). The taps supplying sea water and also fresh water were arranged, as previous experiments had determined, so as gradually to reduce the density by a greater and greater proportion of fresh water, and ultimately the tank contained fresh water alone. The particulars in regard to the density and temperature of the water at different periods are appended. At 11.45 a.m., that is about an hour after the fish were put in, and when the specific gravity was reduced to 16·4, the larger of the fish was found to be lying on its side, and both exhibited signs of distress. An hour later it had recovered its poise. In the afternoon of the same day, when the specific gravity had been reduced to 05·4, 03·2, and 02·8 (the temperature being 54·3° F.), the lice were still to be observed on them. The next morning at 7 a.m., when the water was quite fresh, there were still a few lice on the fish; and one or two continued to be observed on them for some days. One was noted on the 4-lb. fish till the 6th July, clinging behind the anus; on the following day (7th) one still clung to the shoulder of the other specimen, but on Monday, 9th, all had dropped off, and a number of them were found on the bottom of the tank. On the 10th the fish were removed, and were found to have lost, together, about a pound in weight, according to the observation of the salmon fishermen.

The experiment shows that the parasites may cling to the fish for a considerable period in purely fresh water; and that they differ very considerably in their power of resisting its influence. From the distress exhibited by the fish, and the loss of equilibrium of one of them in the early part of the experiment, it appears that the change from the sea water to fresh water was made too rapidly; and the inference is that the passage of a fish from the one to the other under natural conditions would take longer, and probably much longer.

The following table gives the particulars as to specific gravity and temperature at different periods throughout the experiment:—

Date.	Hour.	Sp. Gr.	Temperature.	
			C.	F.
2nd July, .	10.30 a.m.	1027·6	11·6	52·9
	11.45 ,,	1016·4	12·0	53·6
	12.45 p.m.	1011·6	12·0	53·6
	1.45 ,,	1008·2	12·2	54·0
	2.45 ,,	1006·0	12·4	54·3
	3.45 ,,	1005·4	12·4	54·3
	4.30 ,,	1003·2	12·2	54·0
	8.15 ,,	1002·8	12·4	54·3
3rd ,, .	7.0 a.m.	1000·0	12·4	54·3
	4.15 p.m.	,,	13·0	55·4
4th ,,	7.0 a.m.	,,	12·8	55·0
	3.0 p.m.	,,	13·2	55·8
5th ,, .	7.0 a.m.	,,	13·0	55·4
	10.0 ,,	,,	13·0	55·4
	2.0 p.m.	,,	13·4	56·1
	4.45 ,,	,,	13·3	55·9
6th ,, .	7.0 a.m.	,,	13·3	55·9
	10.0 ,,	,,	13·2	55·8
	12 noon	,,	13·3	55·9
	4.30 p.m.	,,	13·3	55·9
7th ,, .	7.0 a.m.	,,	13·8	56·8
	10.0 ,,	,,	13·2	55·8
	12 noon	,,	14·0	57·2
9th ,, .	7.0 a.m.	,,	14·6	58·3
	10.0 ,,	,,	14·6	58·3
	12 noon	,,	14·8	58·6
	4.30 p.m.	,,	15·2	59·4

T. Wemyss Fulton.

My original intention to allow about twenty-four hours for the transference from pure salt to pure fresh water was departed from after reflecting upon the short tidal estuary of the neighbouring river Dee and the supposed rapid transference which took place under natural conditions. The time was therefore cut down to approximately that of a single flood-tide. From the distress shown by the fish it would seem, however, that even at a river mouth where no natural estuary occurs salmon, before entering fresh water, become accustomed to the influence of the river as it passes out into the sea, and that they do not at once, even in summer, swim straight in and immediately ascend. Conversely we have already noticed that kelts descending from the small streams of the West Highlands, where spawning operations are rapid, accumulate and appear to lie for a short time in brackish water.

Whether or not the unduly rapid transference into fresh water caused the sea-lice to sicken also is uncertain. But even allowing that this may have been so, it will, I think, be a surprise to many to know that the sea-lice remained attached for six days, and that after the water had become quite fresh, at a temperature of 55° F., a single parasite remained on one fish for five days and on the other for four days.

W. L. CALDERWOOD.

APPENDIX VI.

Rateable Value of Salmon Fisheries, in Districts where Boards have been formed, for the Years 1881 to 1905 inclusive.

Year.	Alness.		Annan.		Awe.		Ayr.		Balgay.		Bervie.		Conon.		Cree.		Dee (Aberdeen).		Dee (Solway).	
	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
1881	–	–	1,391	–	–	–	–	–	–	–	–	–	–	–	501	–	9,857	–	1,175	–
1882	–	–	1,719	–	–	–	–	–	–	–	–	–	–	–	522	–	9,556	–	1,195	–
1883	–	–	1,720	–	–	–	–	–	–	–	–	–	–	–	532	–	9,931	–	1,200	–
1884	–	–	1,864	–	–	–	–	–	–	–	–	–	–	–	530	–	10,504	–	1,200	–
1885	–	–	1,933		–	–	–	–	–	–	–	–	–	–	645	**546**	10,791	**10,127**	1,235	**1,201**
1886	–	–	1,998	–	–	–	–	–	–	–	–	–	–	–	530	–	10,805	–	1,565	–
1887	–	–	1,993	–	–	–	–	–	–	–	–	–	–	–	540	–	11,220	–	1,615	–
1888	–	–	2,007	-	–	–	–	–	–	–	–	–	–	–	530	–	12,532	–	1,517	–
1889	–		2,007	–	–	–	–	–	–	–	–	–	–	–	530	–	12,036	–	1,517	–
1890	–	–	2,107	**2,022**	701	–	–	–	40	–	585	–	2,624	-	530	**532**	12,274	**11,773**	1,627	**1,568**
1891	–	–	2,112	–	701	–	–	-	40	–	586	–	2,560	–	530	–	11,968	–	1,463	–
1892	–	–	2,099	–	718	-	–	–	40	–	586	–	2,756	–	530	–	12,336	–	1,463	–
1893	–	–	2,165	–	723	–	–	–	40	–	586	–	2,975	–	544	–	13,911	–	1,463	–
1894	579	–	2,778	–	723	–	–	–	40	–	536	–	2,944	–	554	–	14,489	–	1,463	–
1895	584	–	2,793	**2,389**	896	**752**	–	–	20	**36**	536	**566**	2,540	**,755**	554	**542**	14,593	**13,461**	1,633	**1,497**
1896	584	–	3,182	–	896	–	–	–	20	–	1,071	–	2,455	–	571	–	15,820	–	1,603	–
1897	614	–	3,182	–	878	–	–	–	20	–	1,071	–	2,590	–	571	–	16,176	-	1,632	–
1898	608	–	3,182	–	878	–	100	–	20	–	871	–	2,554		696	–	17,468	–	1,603	–
1899	609	–	3,182	–	870	–	110	–	42	–	871	–	2,554	–	696	–	17,427	–	1,603	–
1900	610	**605**	3,182	**3,182**	870	**878**	110	–	20	**24**	871	**951**	2,504	**2,52**	696	**646**	18,989	**17,176**	1,603	**1,609**
1901	606	–	3,196	–	936	–	110	–	20	–	910	–	3,142	–	696	–	19,419	–	1,596	–
1902	601		3,197	–	936	–	110	–	20	–	910	–	3,141	–	696	–	19,455	–	1,557	–
1903	617	–	3,197	–	1,052	–	110	–	40	–	910	–	3,108	–	691	–	18,393	–	1,556	–
*1904	816	–	3,194	–	–	–	110	–	40	–	910	–	2,974	–	695	–	19,078	-	1,556	–
*1905	735	–	3,256	–	1,305	–	110	–	40	–	910	**910**	2,974	–	728	–	19,332	–	1,556	–

* Assessable rentals.

APPENDIX VI.—*continued.*

RATEABLE VALUE OF SALMON FISHERIES, IN DISTRICTS WHERE BOARDS HAVE BEEN FORMED, FOR THE YEARS 1881 TO 1905 INCLUSIVE.

YEAR.	Deveron.		Don.		Doon.		Esk (North).		Esk (South).		Findhorn.		Forth.		Girvan.		Kyle of Sutherland.		Lochy.		Nairn.	
	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
1881	2,354	–	3,303	–	–	–	6,385	–	2,045	–	4,055	–	3,793	–	574	–	2,762	–	1,582	–	–	–
1882	2,575	–	3,025	–	–	–	5,942	–	2,200	–	3,493	–	3,862	–	571	–	2,828	–	1,484	–	–	–
1883	2,569	–	3,016	–	–	–	5,624	–	2,475	–	3,493	–	3,896	–	571	–	2,388	–	1,873	–	–	–
1884	2,549	–	3,499	–	–	–	6,349	–	2,546	–	3,501	–	3,862	–	571	–	2,280	–	1,677	–	–	–
1885	2,340	**2,477**	3,395	**3,247**	–	–	6,757	**6,211**	2,889	**2,431**	3,546	**3,617**	3,931	**3,868**	571	**571**	2,222	**2,496**	1,667	**1,658**	–	–
1886	1,790	–	3,588	–	–	–	7,216	–	2,934	–	3,546	–	4,240	–	571	–	2,545	–	1,682	–	–	–
1887	1,834	–	3,703	–	–	–	6,400	–	3,104	–	3,661	–	4,382	–	542	–	2,558	–	1,749	–	–	–
1888	1,865	–	3,908	–	–	–	6,419	–	3,124	–	3,551	–	4,241	–	542	–	2,585	–	1,628	–	–	–
1889	1,748	–	3,929	–	–	–	6,608	–	3,104	–	3,551	–	4,187	–	542	–	2,610	–	1,866	–	–	–
1890	1,800	**1,807**	3,905	**3,806**	–	–	6,725	**6,673**	3,012	**3,055**	3,541	**3,570**	4,257	**4,261**	542	**547**	2,693	**2,598**	1,674	**1,719**	1,542	–
1891	2,047	–	3,646	–	–	–	6,476	–	3,012	–	3,541	–	3,890	–	542	–	2,640	–	1,895	–	1,543	–
1892	2,071	–	3,623	–	–	–	6,519	–	3,012	–	2,501	–	3,704	–	542	–	2,665	–	1,961	–	1,343	–
1893	2,073	–	3,964	–	–	–	6,609	–	3,012	–	3,491	–	3,765	–	542	–	2,613	–	1,961	–	1,343	–
1894	2,138	–	3,743	–	–	–	6,812	–	3,002	–	3,501	–	3,806	–	554	–	2,658	–	2,122	–	1,343	–
1895	2,383	**2,142**	3,583	**3,711**		–	6,812	**6,645**	3,149	**3,037**	3,501	**3,507**	3,766	**3,786**	544	**544**	2,611	**2,637**	2,122	**2,012**	1,136	**1,341**
1896	2,360	–	3,390	–	–	–	6,519	–	3,149	–	3,446	–	3,617	–	500	–	2,634	–	2,094	–	1,136	–
1897	2,469	–	3,383	–	–	–	6,540	–	3,149	–	3,436	–	3,616	–	524	–	2,731	–	2,115	–	1,135	–
1898	2,658	–	3,374	–	–	–	6,579	–	3,507	–	3,436	–	3,738	–	524	–	2,771	–	2,115	–	1,136	–
1899	2,979	–	3,430	–	–	–	6,523	–	3,424	–	3,436	–	3,792	–	524	–	2,838	–	2,020	–	1,136	–
1900	3,078	**2,708**	3,336	**3,382**	–	–	6,414	**6,515**	3,492	**3,342**	3,511	**3,458**	3,801	**3,712**	544	**523**	2,845	**2,763**	2,338	**2,130**	1,136	**1,136**
1901	3,186	–	3,691	–	473	–	6,510	–	3,492	–	3,527	–	3,925	–	514	–	2,890	–	2,992	–	1,136	–
1902	3,048	–	3,700	–	473	–	6,466	–	3,567	–	3,527	–	3,928	–	528	–	3,132	–	2,306	–	1,139	–
1903	3,105	–	3,646	–	486	–	6,494	–	3,552	–	3,587	–	3,731	–	553	–	2,523	–	2,300	–	1,139	–
*1904	3,387	–	3,863	–	498	–	6,494	–	3,565	–	3,661	–	3,510	–	–	–	3,516	–	2,231	–	–	–
*1905	3,368	–	4,153	–	498	–	6,489	–	3,590	–	3,661	–	3,274	–	544	–	3,514	–	2,231	–	1,218	–

* Assessable rentals.

APPENDIX VI.—*continued.*

RATEABLE VALUE OF SALMON FISHERIES IN DISTRICTS WHERE BOARDS HAVE BEEN FORMED, FOR THE YEARS 1881 TO 1905 INCLUSIVE.

YEAR.	Ness.		Nith.		Skye.		Spey.		Stinchar.		Tay.		Torridon.		Tweed.		Ugie.		Ythan.	
	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.	Annual value.	Average value for each period of 5 years.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
1881	3,075	–	568	–	–	–	10,563	–	–	–	21,698	–	–	–	13,477	–	322	–	746	–
1882	3,198	–	478	–	–	–	9,724	–	–	–	19,630	–	–	–	13,563	–	343	–	746	–
1883	3,285	–	499	–	–	–	8,654	–	–	–	19,223	–	–	–	13,745	–	339	–	790	–
1884	2,924	–	505	–	–	–	8,454	–	–	–	17,773	–	–	–	13,658	–	339	–	726	–
1885	3,030	**3,093**	553	**520**	–	–	8,430	**9,165**	–	–	19,656	**19,596**	–	–	13,557	**13,600**	334	**335**	726	**746**
1886	3,225	–	534	–	–	–	9,483	–	–	–	20,447	–	–	–	13,681	–	301	–	726	–
1887	3,239	–	515	–	–	–	9,559	–	–	–	22,542	–	–	–	14,382	–	290	–	816	–
1888	3,291	–	447	–	–	–	10,663	–	–	–	22,103	–	–	–	14,199	–	284	–	876	–
1889	3,185	–	402	–	–	–	10,663	–	–	–	19,701	–	–	–	14,254	–	351	–	876	–
1890	3,079	**3,203**	423	**464**	–	–	10,669	**10,207**	–	–	17,731	**20,504**	–	–	14,278	**14,158**	348	**314**	876	**834**
1891	3,366	–	443	–	–	–	9,669	–	–	–	17,820	–	40	–	14,414	–	358	–	931	–
1892	3,254	–	423	–	–	–	9,687	–	–	–	17,227	–	40	–	14,746	–	358	–	1,004	–
1893	3,253	–	756	–	–	–	9,687	–	–	–	19,008	–	40	–	14,573	–	358	–	1,004	–
1894	3,468	–	775	–	–	–	9,316	–	–	–	21,763	–	40	–	15,583	–	356	–	1,004	–
1895	3,209	**3,310**	771	**633**	–	–	9,588	**9,589**	–	–	19,587	**19,079**	20	**36**	15,803	**15,023**	402	**366**	1,024	**993**
1896	3,085	–	815	–	–	–	8,671	–	–	–	17,091	–	20	–	15,084	–	503	–	1,024	–
1897	3,503	–	780	–	–	–	9,638	–	–	–	17,211	–	20	–	15,444	–	504	–	1,294	–
1898	3,667	–	781	–	–	–	10,634	–	–	–	17,905	–	20	–	15,239	–	508	–	1,299	–
1899	3,510	–	775	–	–	–	11,633	–	–	–	21,048	–	20	–	15,000	–	768	–	1,299	–
1900	3,647	**3,482**	676	**765**	424	–	10,122	**10,119**	200	–	22,482	**19,147**	20	**20**	15,032	**15,159**	845	**625**	1,317	**1,246**
1901	3,582	–	654	–	540	–	8,608	–	400	–	22,549	–	20	–	15,005	–	839	–	1,398	–
1902	3,636	–	545	–	540	–	8,052	–	400	–	22,608	–	20	–	15,005	–	839	–	1,398	–
1903	3,516	–	554	–	540	–	8,147	–	400	–	22,648	–	40	–	15,338	–	812	–	1,389	–
*1904	3,546	–	584	–	540	–	7,396	–	400	–	23,099	–	–	–	15,439	–	779	–	1,359	–
*1905	3,646	–	–	–	540	**540**	8,364	–	400	**400**	22,675	–	–	–	15,499	–	778	–	1,369	–

* Assessable rentals.

APPENDIX VII.

ANNUAL CLOSE TIME APPLICABLE TO THE SALMON RIVERS IN SCOTLAND.

N.B.—Observe that, in the following List, the days fixing the commencement and termination of the Annual Close Time for Net-fishing and for Rod-fishing, respectively, are in all cases inclusive, as in the case of the Add, the first river in the List.

Name of River.	Annual Close Time for Net-fishing.	Annual Close Time for Rod-fishing.
Add, ...	From Sept. 1 to Feb. 15, both days inclusive.	From Nov. 1 to Feb .15, both days inclusive.
Aline, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Alness, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Annan, ...	From Sept. 10 to Feb. 24.	From Nov. 16 to Feb. 24.
Applecross, . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Arnisdale (*Loch Hourn*), .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Awe, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Aylort (*Kinloch*), . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ayr, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Baa and Goladoir, . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Badachro and Kerry (*Gairloch*), ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Balgay and Shieldag, .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Beauly, ...	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Berriedale, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Bervie, ...	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Bladenoch, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Broom, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Brora, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Carradale (*in Cantyre*), .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Carron, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Clayburn, Finnisbay, Avennangeren, Strathgravat, North Lacastile, Scalladale and Mawrig (*East Harris*), . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Clyde and Leven, . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Conon, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Cree, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Creed or Stornoway, and Laxay (*Island of Lews*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Creran (*Loch Creran*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Croe and Shiel (*Loch Duich*), ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Dee (*Aberdeenshire*), . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Dee (*Kirkcudbright*), . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Deveron	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Don, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Doon, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Drummachloy or Glenmore (*Isle of Bute*), . .	From Sept. 1 to Feb. 15.	From Oct. 16 to Feb. 15.
Dunbeath, ...	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Earn, ...	From Aug. 21 to Feb. 4.	From Nov. 1 to Jan. 31.
Eckaig, ...	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Esk, North, ...	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Esk, South, . . .	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Ewe, ...	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.

Name of River.	Annual Close Time for Net-fishing.	Annual Close Time for Rod-fishing.
Fincastle, Meaveg, Ballanachist, South Lacastile, Borve, and Obb (*West Harris*),	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Findhorn,	From Aug. 27 to Feb. 10.	From Oct. 11 to Feb. 10.
Fleet (*Sutherlandshire*),	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Fleet (*Kirkcudbrightshire*),	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Forss,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Forth,	From Aug. 27 to Feb. 10.	From Oct. 16 to Jan. 14.
Fyne, Shira, and Aray (*Loch Fyne*),	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Girvan,	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Glenelg,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Gour,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Greiss, Laxdale, or Thunga,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Grudie or Dionard,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Gruinard and Little Gruinard,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Halladale, Strathy, Naver, and Borgie,	From Aug. 27 to Feb. 10.	From Oct. 1 to Jan. 11.
Helmsdale,	From Aug. 27 to Feb. 10.	From Oct. 1 to Jan. 10.
Hope and Polla or Strathbeg,	From Aug. 27 to Feb. 10.	From Sept. 11 to Jan. 11.
Howmore,	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Inchard,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Inner (*in Jura*),	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Inver,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Iorsa (*in Arran*),	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Irvine and Garnock,	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Kannaird,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kilchoan or Inverie (*Loch Nevis*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kinloch (*Kyle of Tongue*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kirkaig,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kishorn,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kyle of Sutherland,	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Laggan and Sorn (*Island of Islay*),	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Laxford,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Leven,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Little Loch Broom,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Lochy,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Loch Duich,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Loch Luing,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Loch Roag,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Lossie,	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Luce,	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Lussa (*Island of Mull*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Moidart,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Morar,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Mullanageren, Horasary, and Lochnaciste (*North Uist*),	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Nairn,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Naver and Borgie, *see* Halladale.		
Nell, Feochan, and Euchar,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ness,	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Nith,	From Sept. 10 to Feb. 24.	From Nov. 15 to Feb. 24.
Orkney Islands (*River from Loch of Stenness, &c.*),	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Ormsary (*Loch Killisport*), Loch Head, and Stornoway (*Mull of Cantire*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Pennygowan or Glenforsa, and Aros,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10

Name of River.	Annual Close Time for Net-fishing.	Annual Close Time for Rod-fishing.
Resort,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ruel,	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Sanda,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Scaddle,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Shetland Islands (*River of Sandwater, &c*).,	From Sept. 10 to Feb. 24.	From Nov. 16 to Jan. 31.
Shiel (*Loch Shiel*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Sligachan, Broadford, and Portree (*Isle of Skye*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Snizort, Orley, Oze, and Drynoch (*Isle of Skye*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Spey,	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Stinchar,	From Sept. 10 to Feb. 24.	From Nov. 15 to Feb. 24.
Tay (except Earn),	From Aug. 21 to Feb. 4.	From Oct. 16 to Jan. 14.
Thurso,	From Aug. 27 to Feb. 10.	From Oct. 6 to Jan. 10.
Torridon, Balgay, and Shieldag,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ugie,	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Ullapool (*Loch Broom*),	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Urr,	From Sept. 10 to Feb. 24.	From Nov. 30 to Feb. 24.
Wick,	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ythan,	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.

APPENDIX VIII.

LIST OF CHAIRMEN AND CLERKS OF SALMON FISHERY DISTRICT BOARDS IN SCOTLAND.

District.	Name and Address of Chairman.	Name and Address of Clerk.
Alness,	Col. Alex. J. C. Warrand, Ryefield House, Conon Bridge, Dingwall.	William J. Duncan, Solicitor, Dingwall.
Annan,	A. Johnstone Douglas, Esq., Comlongan Castle, Ruthwell.	John F. Cormack, Solicitor, Lockerbie.
Awe,	The Duke of Argyll, Inveraray Castle, Inveraray.	Alex. MacArthur, Solicitor, Oban.
Ayr,	Richard A. Oswald, Esq., of Auchincruive, Ayr.	Wilfrid C. Macrorie, Commercial Bank, Ayr.
Baa & Glencoilleader (Mull)	The Duke of Argyll, Inveraray Castle, Inveraray.	Alex. MacArthur, Solicitor, Oban.
Balgay,	C. R. Manners, Esq., C.E., 12 Lombard Street, Inverness.	Duncan Shaw, W.S., 15 High Street, Inverness.
Bervie,	David Scott Porteous, Esq., of Lauriston, as mandatory of the Commissioners of Woods and Forests.	W. C. Walls, Solicitor, Montrose.
Bladenoch,	The Mandatory of the Earl of Galloway.	John Black, Solicitor, Wigtown.
Broom,	W. Ewing-Gilmour, Esq., of Inverlael, per A. W. G. Aitken, Esq., S.S.C., Edinburgh.	W. R. T. Middleton, Solicitor, Dingwall.
Conon,	John Little Mounsey, Esq., W.S., 5 Thistle Street, Edinburgh, Commissioner for Col. J. A. F. H. Stewart Mackenzie of Seaforth.	W. R. T. Middleton, Solicitor, Dingwall.
Cree,	The Earl of Galloway, Cumloden, Newton-Stewart.	A. B. Matthews, Solicitor, Newton-Stewart.
Dee (Aberdeen),	The Lord Provost of Aberdeen.	Alex. Duffus, Advocate, Aberdeen.
Dee (Solway),	Col. W. J. M. Baillie of Cally, Gatehouse.	W. Nicholson, Sheriff-Clerk, Kirkcudbright.
Deveron,	Wm. MacIntosh, Esq., Factor for the Duke of Fife, St. Leonards, Banff.	Francis George, Solicitor, Banff.
Don,	Vacant.	Alex. Duffus, Advocate, Aberdeen.
Doon,	Marquis of Ailsa, Culzean Castle, Maybole.	Wilfred C. Macrorie, Solicitor, Ayr.
Esk (North),	The Rev. J. S. More Gordon of Charleton and Kinnaber, per George More Gordon, Esq., Charleton, Montrose.	J. R. Findlay, Solicitor, Montrose.
Esk (South)	William Douglas Johnston, Esq., Montrose.	James Don and David G. Shiell, Solicitors, Brechin.
Findhorn,	R. C. Munro Ferguson, Esq., of Novar, M.P., per J. J. Meiklejohn, Esq., factor.	William Grant, National Bank Buildings, Forres.
Forth,	Mandatory of Commissioners of Woods and Forests.	Patrick Welsh, County Buildings, Stirling.
Girvan,	John Campbell Kennedy, Esq., of Dunure.	T. Gerald Tait, Solicitor, Girvan.
Gruinard and Little Gruinard,	Alfred N. G. Aitken, Esq., S.S.C., Edinburgh, Factor and Commissioner for Hugh Mackenzie, Esq., of Dundonnell.	W. R. T. Middleton, Solicitor, Dingwall.
Kyle of Sutherland,	Sir Charles Lockhart Ross, Bart., of Balnagowan.	John M'Crone, Solicitor, Dornoch.
Little Broom,	Alfred N. G. Aitken, Esq., S.S.C., Edinburgh, Factor and Commissioner for Hugh Mackenzie, Esq., of Dundonnell.	W. R. T. Middleton, Solicitor, Dingwall.

APPENDIX VIII. (*continued*)—LIST OF CHAIRMEN AND CLERKS OF SALMON FISHERY DISTRICT BOARDS IN SCOTLAND.

DISTRICT.	Name and Address of Chairman.	Name and Address of Clerk.
Lochy, - -	Lord Abinger, Inverlochy Castle, Fort-William.	N. B. Mackenzie, Solicitor, Fort-William.
Lossie, - -	The Duke of Richmond and Gordon, Gordon Castle, Fochabers, per George Muirhead, Esq.. Commissioner.	John Wink, Solicitor, Elgin.
Nairn, - -	Brodie of Brodie, Brodie Castle, Forres.	H. T Donaldson, Solicitor, Nairn.
Ness, - -	George Malcolm, Esq., Factor for Mrs. Ellice of Invergarry, Fort-Augustus.	Anderson & Shaw, Solicitors, Inverness.
Nith, - -	John Henderson, Esq., Solicitor, Dumfries.	C. Steuart Phyn, Procurator-Fiscal, Dumfries.
Sligachan, Broadford, & Portree (Skye)	Lachlan Macdonald, Esq., of Skeabost.	Kenneth Macrae, Sheriff-Clerk, Portree.
Snizort, Orley, Oze, and Drynock (Skye),	Lachlan Macdonald, Esq., of Skeabost.	Kenneth Macrae, Sheriff-Clerk, Portree.
Spey, - -	The Duke of Richmond and Gordon, Gordon Castle, Fochabers, per George Muirhead, Esq., Commissioner.	John Wink, Solicitor, Elgin.
Stinchar, - -	The Earl of Stair, Lochinch, Wigtownshire.	Stair M'Harrie, Rephad, Stranraer.
Tay, - -	Hon. Morton Stuart Gray, Kinfauns Castle, Perth.	Condie, Mackenzie, & Co., Solicitors, Perth.
Thurso, - -	Peter Keith, Esq., mandatory for Sir J. G. Tollemache Sinclair, Bart., of Ulbster.	David Keith-Murray, Solicitor, Thurso.
Torridon, -	C. R. Manners, Esq., C.E., 12 Lombard Street, Inverness.	Duncan Shaw, W.S., 15 High Street, Inverness.
Ugie, - -	Lieut.-Col. Ferguson, of Pitfour, Mintlaw.	Robert Gray, Solicitor, Peterhead.
Ythan, - -	Earl of Errol, Slains Castle, Aberdeenshire.	D. M. A. Chalmers, Advocate, Aberdeen.
Tweed (Police Committee of the Commissioners),	Sir Richard John Waldie-Griffith, Bart., of Hendersyde Park, Kelso.	David W. B. Tait, W.S., Kelso.

Note.—In addition to the districts specified above, the Duke of Sutherland is sole proprietor of the districts of the following rivers, viz. :—Helmsdale, Brora, Fleet, Kirkaig, Inver, Laxford, and Inchard (under the charge of his factor, Mr Donald M'Lean, Dunrobin Office, Golspie); and the Halladale, Naver, Borgie, and Kinloch (under the charge of his factor, Mr John Morrison, Tongue); W. E. Gilmour, Esq., of Rosehall, etc., is proprietor of the rivers Dionard, Polla, Strathy, and Armadale, also in the north of Sutherland, and part owner, with the Duke of Sutherland, of the river Hope; Lord Lovat has practically sole right of fishing in the river Beauly (Mr J. T. Garrioch, Beauly, factor); and the Countess of Cromartie is sole proprietrix of the district of the river Kinnaird (under the charge of her factor, Mr George Wetherspoon, Cromartie Estate Office, Kildary).

Fishery Board for Scotland,
Edinburgh, April 1906.

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TWENTY-FIFTH
ANNUAL REPORT
OF THE
FISHERY BOARD FOR SCOTLAND,
Being for the Year 1906.

IN THREE PARTS.

Part I.—GENERAL REPORT.
Part II.—REPORT ON SALMON FISHERIES.
Part III.—SCIENTIFIC INVESTIGATIONS.

PART II.—REPORT ON SALMON FISHERIES

Presented to both Houses of Parliament by Command of His Majesty.

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TWENTY-FIFTH
ANNUAL REPORT
OF THE
FISHERY BOARD FOR SCOTLAND.

Being for the Year 1906.

IN THREE PARTS.

PART I.—GENERAL REPORT.
PART II.—REPORT ON SALMON FISHERIES.
PART III.—SCIENTIFIC INVESTIGATIONS.

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Presented to both Houses of Parliament by Command of His Majesty.

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TWENTY-FIFTH ANNUAL REPORT.

TO THE RIGHT HONOURABLE
JOHN SINCLAIR, M.P.,
His Majesty's Secretary for Scotland.

Office of The Fishery Board
for Scotland,
Edinburgh, 20*th November*, 1907.

Sir,

In continuation of our Twenty-fifth Annual Report, we have the honour to submit—

PART III.—SCIENTIFIC INVESTIGATIONS.

GENERAL STATEMENT.

This part of the Twenty-fifth Annual Report deals with the scientific investigations in connection with the sea fisheries of Scotland, so far as they have been completed, which have been conducted by the Board in 1906 by means of the Parliamentary Vote granted for the purpose.

The scientific work has, as usual, been carried out under the supervision of Dr. T. Wemyss Fulton, the Scientific Superintendent under the Board, the researches having been undertaken for the most part at the Board's Marine Laboratory at Aberdeen, and in the Firth of Clyde. The hatchery for sea fishes is also situated at Aberdeen, and a statement as to the hatching work done at it during the year will be found below.

As was explained in last year's Report, the investigations into the condition of the fishing-grounds in the Moray Firth and Aberdeen Bay by means of commercial trawlers employed for that purpose were interrupted at the end of the previous year.

In the Firth of Clyde, and more particularly in Loch Fyne, an investigation into the herring fishery and the natural history and migrations of the herring was continued, mainly with the view of throwing light on the decline in the catch of herrings there in recent years, and as to whether any regulations affecting the fishery, either as to the period of fishing or the methods, would be likely to be generally beneficial. Since the Board have no steamer available for this investigation, the work has been done as far as possible by the employment of fishing-boats and the hire of a small sailing yacht for periodical observations in Loch Fyne.

THE HATCHING AND REARING OF PLAICE.

In the Annual Report for last year an account was given of the reconstruction of the hatchery at Bay of Nigg, Aberdeen, with illustrations showing the exterior and interior, the ponds, pumping plant, &c. The adult plaice from which the spawn is obtained are confined in a large tidal pond, where they are kept and fed throughout the year. At the spawning season the eggs are shed into the water of the pond, from which they are collected by means of a large gauze net, and transferred to the hatching apparatus. They are maintained in the hatching apparatus until the young fishes hatch out, the length of this period depending directly upon the temperature of the water. At the commencement of the spawning season, when the temperature of the water is low, the duration of the period of incubation is on the average about three weeks; at the end of the season, when the temperature has risen considerably, it occupies about a fortnight. The larval fishes, after they are hatched, are kept in the apparatus for several days until the yolk-sac is partly absorbed, and they are then placed in the sea.

The success of the hatching operations depends very largely upon an adequate supply of eggs and of pure water throughout the season. In order to obtain a large supply of eggs it is necessary that the number of adult fishes in the pond should be large. Hitherto this has been accomplished tolerably well by the employment of a commercial steam-trawler within the territorial waters, particularly in Aberdeen Bay and the Moray Firth, which was used in connection with the investigations of the grounds above referred to. By an arrangement with the owners, the hatchery attendant accompanied the vessel on such occasions, selecting from the catches such fishes as suited the purpose, and these were kept alive in tubs on board and brought to the hatchery. The plaice required were thus obtained gratis, the remainder of the fish becoming the property of the owners. By the method described the stock of spawners has been maintained from year to year; for, though a large proportion of the fishes of one season survive to the next, there is always a considerable loss which requires to be made good. But, as mentioned in last year's Report, the vessel which was engaged in this work at the end of 1905 was stranded in Aberdeen Bay, and owing to the loss of life occasioned thereby the Board have thought it right to refrain from making use of such vessels in inshore work. In consequence of this, the stock has not been renewed, and the supply of spawn was much less than in former years. Under present circumstances it is not possible to procure supplies of living plaice by means of the ordinary commercial trawlers working in the North Sea. The fish desired are only found in abundance on the inshore grounds, and the cost of obtaining a sufficient number from the offshore would be considerable.

In the season of 1906 the eggs were first observed in the water of the spawning-pond at the beginning of February; the spawning gradually increased towards the end of the month, and was greatest in March and the early part of April, and the last eggs were obtained on 13th May. The total number of eggs collected from the pond was estimated at 7,486,000, as compared with 40,110,000 in the previous year, so that the decrease, for the reason mentioned, was great. The estimated number of fry which were hatched out and put into the sea was 4,406,000, the loss being equivalent to about 41 per cent., which is higher than usual. The principal cause of this was an insufficient supply of pure water towards the end of March, owing to a defect in the filtering arrangements in the rebuilt hatchery, which was afterwards remedied.

The fry were put into the sea in the neighbourhood of Aberdeen in March, April, and May. The number of eggs collected and the number of fry put out at the Bay of Nigg hatchery during the last seven years are as follows:—

Year.	Eggs Collected.	Fry Hatched.
1900 . . .	43,290,000	31,305,000
1901 . . .	63,370,000	51,800,000
1902 . . .	72,410,000	55,700,000
1903 . . .	65,940,000	53,600,000
1904 . . .	39,600,000	34,780,000
1905 . . .	40,110,000	15,790,000
1906 . . .	7,486,000	4,406,000

Owing to the small number of fry available it was not feasible to forward supplies to the northern parts of the coast of Aberdeen, for which the fishermen had petitioned.

It may be mentioned that the expense in connection with the hatching work is comparatively small, since it is carried on in conjunction with the Marine Laboratory without any additional staff. The total expenditure for extra coals, food for the fishes, &c., was estimated at under £80.

During the season the hatchery was visited by delegations of fishermen from the counties of Argyll, Bute, Caithness, and Elgin, under arrangements made with the various County Councils.

SCIENTIFIC AND TECHNICAL INSTRUCTION TO FISHERMEN.

By an arrangement originally made with the Technical Committee of the County Council of Aberdeenshire, representative fishermen from various parts of the coast of that county for some years visited the Marine Laboratory in spring to attend demonstrations on the life-history and habits of fishes, such as might be of interest and use to them, and to see the processes of fish-hatching. The arrangement was afterwards extended to other counties owing to the interest taken by the fishermen in the instruction they received, and, as above stated, fishermen from several other counties attended in the spring of last year. Among the subjects taught were the life-history of such fishes as the herring, cod, haddock, and plaice, as well as of the mussel and edible crustacea. The food, growth, reproduction, &c., of fishes were explained and illustrated by specimens and experiments, and the processes of fertilisation demonstrated, as well as the development of the fishes within the egg.

On this question of the technical and scientific education of fishermen many or most other European countries are in advance of ourselves, special schools being devoted to the work, directly or indirectly under the patronage of the State. It may be mentioned that in the Technical College which it has been decided to establish at Aberdeen provision will be made for the instruction of those connected with the fishing industry in various branches of knowledge bearing upon that industry, such as the preservation of fish and the utilisation of fish-products.

INVESTIGATIONS ON THE HERRING FISHERIES IN THE FIRTH OF CLYDE.

During the last few years, as mentioned in previous Annual Reports, an enquiry has been in progress with respect to the herring fisheries in the Firth of Clyde, and especially in Loch Fyne. Those fisheries, like the herring fishery on other parts of the coast, are subject to considerable fluctuations from year to year; and from the circumstance that they are often carried on in comparatively confined and narrow waters, and by several methods of fishing, they have given rise at various times of scarcity to controversies regarding the modes, seasons, or places of fishing. Of late years such complaints have been somewhat common in Loch Fyne, owing to the failure of the fishery in that important loch, the catch having gradually declined from 1897, when the maximum quantity for any year was recorded, to a low point in 1905 and 1906.

The object of the enquiry was to ascertain the nature and extent of the annual fluctuations, and, as far as possible, their causes, and the movements of the shoals of herrings into and out of Loch Fyne. The scheme of investigation included (1) a study of all the statistics of former years that were available; (2) periodical observations on the temperature of the water, and the "plankton" or floating organisms, at different depths; (3) the marking and liberation of herrings when possible, with the view of discovering their migrations; and (4) the examination of large numbers of samples of herrings from various parts of the Clyde, to determine especially the condition of the reproductive organs at different periods and the rapidity with which these organs develop and become fully mature. An investigation of this kind is difficult under the most favourable circumstances and must necessarily cover several successive seasons; and since the range of movement of a shoal of herrings on any part of the coast is at present unknown, it was desired that the investigation might cover at least the whole of the sea area of the Clyde, and in particular the channels by which the herrings enter and leave Loch Fyne. With the means at disposal it was, however, found impossible to extend the periodical observations in this way, which have therefore been limited to Loch Fyne.

In the present volume a report by Dr. Wemyss Fulton will be found dealing with the statistics of the herring fisheries in the Firth of Clyde during past years; and also descriptive of the methods of fishing employed and of the former enquiries made on the subject. The statistics are of two kinds—those published in the annual reports, and those derived from the weekly report books of the various districts. The former go back for nearly a century, to the year 1809, when the Board of British White Herring Fishery was established. They, however, only include the quantities of herrings which were cured, either on shore or on board vessels, for the greater part of the period, and which were landed in the districts. In a series of tables appended to the report these statistics are summarised, both in regard to the herrings which were cured and in regard to the numbers of fishermen and boats which were employed in the various districts of the Clyde. The second class of statistics go back to the year 1854, so that they cover the considerable period of 53 years, and they are of especial value as showing not only the quantity of herrings landed per week, month, and year throughout the period, but also, in the great majority of cases, the places where the fish were mostly caught throughout the season. These statistics are also summarised in a series of tables appended to the report.

With regard first of all to the productiveness of the herring fishery in the Firth of Clyde as a whole, the statistics show that the latter part of the period was more productive than the first part. The aggregate quantity of herrings taken in the 53 years was 3,314,585 crans, or about 11,601,000 cwts., the mean annual quantity being 62,540 crans. In the first twenty-six years, 1854–1879, the quantity landed was 1,254,902 crans, the average per annum being 48,270 crans; whereas in the last twenty-six years, 1881–1906, the gross quantity landed was 1,950,849 crans, the annual mean being 75,030 crans. The excess in the total quantity landed in the latter period was thus 695,947 crans, while the excess in the mean per annum was 26,760 crans.

This increase in the yield of the herring fishery was caused by the increase in the two western districts of Campbeltown and Inveraray or Loch Fyne. Taking them together the mean annual catch in the years 1854–1879 was 29,810 crans, while in the years 1881–1906 it was 56,523 crans, an average annual increase of 26,713 crans. In Loch Fyne the increase was from 22,986 crans in the earlier period to 27,375 crans in the latter period, the mean annual increase being 4389 crans. In the Campbeltown district the mean in the first period was 14,452 crans, and in the last period 26,944 crans, the mean annual increase being 12,492 crans. These figures show that the herring fishery in those districts has on the whole increased in the period. In the other three districts in the Clyde, Rothesay, Greenock, and Ballantrae, on the other hand, the average annual yield has diminished; in the first by 3290 crans, in the second by 2100 crans, and in the third by 2658 crans, in the periods shown in the Tables.

The extent of the annual fluctuations has been considerable. The average annual yield in crans in the various districts and in the Clyde as a whole in ten-year periods is shown as follows:—

	Rothesay.	Greenock.	Ballantrae.	Campbeltown.	Loch Fyne.	Campbeltown and Loch Fyne	Whole Clyde.
1857–66	13,497	*3,170	...	...	...	29,557	46,225
1867–76	12,006	6,472	4,535	8,185	20,255	28,440	51,454
1877–86	4,405	1,634	20,518	29,286	25,679	54,966	81,523
1887–96	7,269	1,587	8,566	26,158	30,943	57,101	74,523
1897–06	9,040	1,689	5,397	26,503	24,889	51,392	67,518

* Includes figures for Ballantrae which, until 1863, was part of Greenock District.

With regard to the fishing in Loch Fyne the tables and plates show that the good years and the bad years come in groups, and that only on one occasion, 1897, a very good year followed a year in which the catch was below the average. They also show that the recent period of poor fishing was almost exactly paralleled about thirty-two years ago (1872–1874), when a slightly lower point was reached, the curve of fluctuations being closely similar in the two periods.

Tables are also appended to the report showing that the fluctuations from year to year in Loch Fyne are not greater than they are in other areas on the East and West Coasts, where the mean annual yield is about the same.

THE FOOD-VALUE OF THE HERRING.

In continuation of his research on the food-value of the Loch Fyne and West Coast herring, the results of which were published in last year's Report, Professor Milroy, of Queen's College, Belfast, contributes to the present Report a paper on the food-value of the East Coast autumn herring. The fish were obtained at Shetland and Fraserburgh, and comprised specimens of the classes known commercially as matties, fulls, large fulls, and spents. The composition of the herring-muscle or flesh is stated in percentages of water, total proteids, coagulable proteids, and fat; the coagulable proteids represent the proteids which are coagulated on boiling the fish, and are important as an indication of the nutritive value. The percentage amount of fat in the fish is in many respects the most valuable indication of the food-value of the herring, but it must not be regarded as the sole one. The herrings richest in fats were the matties and the mattie-fulls—fish in which the reproductive organs were but little developed—while the lowest percentages were found in large spent herrings and large fulls. In spent fish the proportion of fat varied from 6·15 per cent. to 9·32 per cent.; in fulls (in which the reproductive organs are almost or quite developed) the percentage varied from 7·53 to 12·44; in matties and mattie-fulls it ranged from 10·42 to 16·68 per cent. Taken as a whole, the spent fish have a lower fat-percentage than the corresponding full fish; but it is possible that in some cases the fat-percentage of even spent fish may be higher than that of full fish, owing to the fact that they have been feeding and commenced to store fat again.

Professor Milroy points out in comparing the West Coast and East Coast fish that one is struck with the lower water and the higher proteid and fat-percentages in the latter than in the former; such low fat-percentages as were obtained in some of the winter West Coast herrings were never found in the East Coast autumn herrings. It was found, as a rule, that the fish which possessed the highest percentage of fat in their muscles had the ovaries some time short of full maturity. Usually fish with ovaries of about one-fourth of the weight of the ovary when fully mature contained the highest percentage of fat in their muscles. There is a gradual loss of fat during the later stages of maturation of the ovaries, succeeded by a serious loss after the spawning of the fish. This loss after spawning is evidently a very rapid one, as, although there must be a short period after spawning when the spent fish contains practically the same amount of fat as the full fish, it is rare that one observes this in analyses, and when it is observed it is possibly in some cases due to the fact that the fish is a spent fish in the period of recuperation. It is after spawning that the muscles of the fish lose the largest amount of their stored nutritive material, and it is then that the most undoubted loss of weight occurs, over and above that which can be accounted for by the complete discharge of the ovaries.

THE FOOD OF THE HERRING.

Dr. Thomas Scott contributes a paper to the present Report on the food of the herring, as determined by the examination of the stomachs of over five hundred specimens obtained from various districts, including Loch Fyne, Stornoway, Loch Broom, and the Firths of Forth and Clyde. The food observed consisted of post-larval fishes (chiefly herrings, sprats, and sand-eels) to some extent, but mostly of pelagic crustacea. Among the latter the most important as food for the herring appear to be certain Schizopods, Amphipods, and also Copepoda, as *Calanus*. Dr. Scott also examined into the condition known as "gutpoke," which is to be observed in many of the herrings taken in Loch Fyne, especially in the earlier part of the season. In this condition the stomach and intestine are distended with food of a soft and oily nature, such as *Calanus* and post-larvel clupeoids, which passes along the gut without being properly digested and causes rapid decomposition to set in.

THE SPAWNING, GROWTH, AND MOVEMENT OF THE MUSSEL, HORSE-MUSSEL, AND THE SPOUT-FISH.

On these subjects Dr. H. C. Williamson contributes a paper to this Report, illustrated with a number of figures. The development and condition of the reproductive organs in the common mussel in various months of the year are described, specimens having been kept in aquaria. At the Bay of Nigg the common mussel was observed to spawn in April and in June, but its spawning time is known to be more extended. Observations were also made on the growth of the mussel and the conditions favourable and unfavourable to growth, as well as on its movements and the anatomy of the byssus and foot.

THE INVERTEBRATE FAUNA.

Dr. Scott, in continuation of his work among the smaller marine crustacea which have been obtained in the course of the fishery investigations, has prepared a paper, printed in this Report, on a number of interesting forms. Two of the species which are dealt with were discovered as parasites on the piked dogfish, and are here described for the first time, and another occurs as a commensal in the branchial chamber of large ascidians. The paper is illustrated with three plates.

We have the honour to be,

SIR,

Your most obedient Servants,

ANGUS SUTHERLAND, *Chairman.*
D. CRAWFORD, *Deputy-Chairman.*
D'ARCY W. THOMPSON.
W. R. DUGUID.
L. MILLOY.
D. MEARNS.
H. WATSON

WM. C. ROBERTSON, *Secretary.*

SCIENTIFIC REPORTS.

I.—REPORT ON AN ENQUIRY INTO THE HERRING FISHERIES OF THE FIRTH OF CLYDE.

PART I.—THE STATISTICS OF THE FISHERIES. By Dr. T. WEMYSS FULTON, Scientific Superintendent.

(Plates I.–XII.)

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During the last few years, as mentioned in previous Annual Reports, an enquiry has been in progress with respect to the herring fisheries in the Firth of Clyde, and especially in Loch Fyne. Those fisheries, like the herring fishery on other parts of the coast, are subject to considerable fluctuations from year to year; and from the circumstance that they are carried on in comparatively confined and narrow waters and by several methods of fishing, they have given rise at various times of scarcity to controversy concerning usually either the alleged injuriousness of one or other of the modes of capture, or of the fishing being pursued at an improper season at a particular place. Of late years such complaints have been accentuated owing to the failure of the fishing in Loch Fyne. In that important area the yield has declined gradually since 1897, the year in which the maximum quantity recorded was obtained, and a very low point was reached in 1905 and 1906. It will be shown later that the recent diminished productiveness of the herring-fishing in Loch Fyne is an almost exact repetition of what occurred in the period 1868-1874, when even a lower point was reached.

The objects of the enquiry were to ascertain the nature and extent of the fluctuations, and as far as possible their causes; to throw light on the movements of the shoals into and out of the Loch in relation to the temperature of the water and the amount of food material present in it; and to determine the extent, places, and seasons of spawning. A scheme was accordingly prepared on which the investigation might proceed, comprising the following:—(1) A study of all the statistics that could be obtained for each of the Clyde fishery districts in former years, going as far back as possible, and of the reports and remarks of the Fishery Officers. (2) Serial observations at intervals on the temperature of the water at different depths. (3) Simultaneous collections of the plankton or floating organisms upon which the herring principally feeds. (4) The marking and liberation of herrings when possible, with the view of ascertaining their movements. (5) The examination of large numbers of herrings periodically from various parts of the Clyde, to determine their feeding, the condition of the reproductive organs as to maturity, and the rapidity with which these organs develop and become fully mature. Special nets have also been used to ascertain the presence of small post-larval and young herrings in the loch, and a research was made by Professor Milroy on the chemical composition of the herrings at different sexual stages, the results of which have already appeared.*

Since the range of movement of a shoal of herrings at different periods of the year on any part of the coast is unknown, but is believed to be considerable, it was desired that the investigation might cover at least the whole of the sea area of the Clyde. It was obviously of importance that the observations should not be confined to Loch Fyne, but should include the other parts of the Firth, and particularly the channels by which the herrings enter or leave the loch. Comparison of the temperatures and of the plankton at any given time in these areas would be of value. It was, however, found to be impossible to extend the observations in the way indicated, owing to the want of means, and, with the exception noted below, the temperature and plankton observations have been limited to Loch Fyne, a small yacht and boats being hired for the purpose, since no steamer is at the disposal of the Board for such work in the Clyde.

A number of "Stations" were fixed upon at intervals of a few miles, extending from near the mouth of the loch to the neighbourhood of Inveraray. At each Station the temperature of the water was determined at intervals of fifteen fathoms from the surface to the bottom, collections of plankton being also made at the same levels, and the observations were carried on as far as possible in each month throughout the year. In addition to these Captain Alexander, of the superintending Fishery cruiser "Vigilant," has taken observations of the temperature of the water (without plankton collections) at the surface, bottom, and one intermediate depth, at various parts of the Firth of Clyde, and these records, with the sanction of the Board, have been placed at disposal.

The various investigations noted above are being continued, and will be reported on later. This part of the report deals with the fluctuations in the yield of the fishery from year to year, and is based upon the statistics which have been collected by the Fishery Officers of the various districts since 1809, but mainly since 1854, as more fully explained below.

THE METHODS OF FISHING.

In the Firth of Clyde herrings are captured by three methods of fishing—viz., by drift-nets, seine-nets, and set-nets or ground-nets, of which the two former, and especially the seine-net, are the more important. Many fishermen make use of more than one method, and it is common for the seine-net or the drift-net to be used by the same crews at different times according to the judgment of the men as to which is likely to be the more successful. The set-nets, locally but improperly called "trammels," are used principally at Ballantrae and on the Ayrshire coast, and also to a small extent in other localities occasionally, as in the upper reaches of Loch Fyne and the Kyles of Bute. By far the most important method nowadays is the seine, or so-called "trawl," as is shown by the following figures representing the *percentages* of each method of fishing in the Firth of Clyde districts for the year 1906.

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* See *Twenty-Fourth Annual Report,* Part III., p. 83.

Seine-net.				Drift-net.				Set-net.			
Boats.	Men.	Herrings.		Boats.	Men.	Herrings.		Boats.	Men.	Herrings.	
		Cwts.	£			Cwts.	£			Cwts.	£
65	71	73	70	29	25	21·5	25	5	4	5·5	5

The seine-net, which is said to have been first used in Loch Fyne in 1838, and was then improvised from a drift-net, varies from about 150 to 180 yards in length when mounted on the ropes and ready for use. The depth, which is the same throughout, may extend to twenty fathoms, or about forty yards. The meshes of the sides or wings of the net range from 33 to 35 to the yard, but in the central part or bag, where the strain is greatest when the net is hauled, the meshes are somewhat smaller and the twine of greater thickness. The upper rope of the net is corked at intervals, and the sole rope is weighted with leaden sinkers, while the draw-rope at the bottom, by which the net is hauled, may be from 200 to 300 fathoms in length. The seine-net is worked by two boats, or pairs, each of which has four men, so that eight men are employed in connection with each seine. It may be used from the shore or in shallow water like an ordinary ground-seine, a method known as "scringing," and then it is not uncommon for other fishes than herrings to be taken, especially flat fishes on certain grounds. When employed in deep water, as towards the middle of Loch Fyne, the method is known as "ringing" or "circling." The pair of fishing skiffs sail slowly about, never very far apart from one another, looking for the signs of herrings, and when it is decided to shoot the net, the method is as follows. One of the boats is anchored or stationary, and the end of the rope is passed to it from the other boat, which then moves off paying out the net as it goes, and after making a sweep to enclose the fish it returns to the stationary boat. The net is then hauled, care being taken as far as possible to prevent the escape of the herrings downwards by drawing the lower edge of the net under them as the circle is contracted; this edge is then brought on board, and the breadth of the net forms a bag in which the herrings are contained, and from which they are removed to the boat. This method of fishing is sometimes very successful, enormous quantities of fish being occasionally obtained, and it is not uncommon for the net to burst owing to the weight of herrings in it. From the fact that the meshes of the seine are narrow, and the strain upon them when hauling tends to contract them still further, it sometimes happens that large quantities of small or unsaleable herrings are taken by it. This has been often a subject of complaint by fishermen pursuing other methods, and especially by those using the drift-net.

The drift-net and the set-net act in a different way. They are both gill-nets, the herrings being caught by the gills as they endeavour to pass through the meshes. The drift-net floats in the water, usually at or near the surface, but in Loch Fyne, particularly in the deep upper loch, it may be used by lengthening the buoy ropes in very considerable depths, as far down as sixty fathoms. A "train" or "fleet" of drift-nets may contain from ten to eighteen or more nets, and from the fact that the meshes are larger, running from about 31 to 34 in a yard, and that they stand open, the smaller class of herrings escapes capture, and the size of the herrings caught is more uniform as a rule than with the seine-net. The set-net or ground-net fishes in the same manner as the drift-net, but it is anchored to the bottom. It consists essentially of a strip of drift-net, sixty to eighty meshes deep, the upper rope corked and the lower weighted, so that it stands as a wall of netting rising up from near the bottom. At Ballantrae, where it is chiefly employed, the nets are left in the water over-night, and visited each morning when the weather permits, the herrings being removed and the net again set. It is an effective method on a spawning ground, as Ballantrae Bank.

One of the chief complaints which have been made in the past among the herring fishermen in Loch Fyne refers to the use of the seine-net, or so-called "herring trawl." As already stated, this method is believed to have been introduced about 1838, and it was so successful that within a few years it was very commonly employed, and disputes soon arose between the "trawlers" or seiners and the ordinary drift-net fishermen. The latter alleged that the seine-net was injurious by destroying large quantities of small and immature herrings, by dispersing the "eyes" or shoals of herrings entering Loch Fyne or other narrow waters, and by disturbing and destroying the spawn when used over spawning grounds. This view was supported by the fish-merchants and accepted by the authorities, and in 1851 an Act of Parliament was passed prohibiting the employment of the seine for catching herrings, and recognising the drift-net as the only legal method of capture.* Great difficulty was found in enforcing this Act, and the seine-net fishermen endeavoured to evade it by all the means in their power. It is clear from the reports of the Fishery Officers, as well as from the official enquiries held later, that seining continued year after year, and was sometimes, indeed, the method by which the greater quantity of herrings was obtained, especially after 1854, when the superintending gunboat was withdrawn owing to the outbreak of war with Russia. It is not surprising that this should have been the case, because again and again it is recorded that while the drifters were obtaining a few hundred herrings the "trawlers" were making large hauls and large profits, their fish sometimes selling (1857) for as much as 28s. 6d. the "long" hundred, of 120, or nearly threepence each. The headquarters of the seiners was Tarbert, though many seines were also employed by Ardrishaig boats, while at Inveraray and in the other parts of the upper loch the drift alone was used. In 1858, and again in 1859, herrings were abundant in Upper Loch Fyne, and on the seiners from the lower loch making their way thither, the drift-net fishermen declared their intention of enforcing the Act against the use of the seine-net, and for this purpose took firearms on board their boats. In 1860 another and more stringent Act was passed against seine-net fishing for herrings,* and it was enforced as far as possible in the Clyde with the assistance of two gunboats and a staff of police on shore. Seining, however, still went on, especially from Tarbert, and in 1861 a third Act was found to be necessary, which gave power not only to seize and forfeit the seine-nets, but also the boats using them and all the fish they might contain.† Under this Act numerous boats and nets were seized and destroyed. In June, 1861, a fisherman was shot dead by a marine of one of the gunboats engaged in suppressing "trawling," and the Fishery Officer remarks, with reference to this occurrence, that the "fishermen are as determined on trawling as ever, and say they won't give it up, and condemning themselves martyrs, they seem inclined to court martyrdom" Later in the same month he reported that the fishing was being very irregularly conducted, and "although the fishermen state that they see plenty of herrings, they cannot succeed in getting them by drift-nets, and the cruisers' boats harass the trawlers so much that they cannot manage with all their ingenuity to get a haul." In this year very little seining took place, owing to the strength and vigilance of the police force both on sea and shore, and the herrings being abundant and the drifters successful, the fishermen very generally equipped themselves with drift-nets and made use of that method of fishing.

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* "An Act to Amend the Acts relating to the British White Herring Fishery," 14 and 15 Vict., c. 26, s. 6.

In this year, also, an important Commission was appointed to enquire into the operation of the Acts above referred to. It was composed of Dr. Lyon Playfair, Professor Huxley, and Lieut.-Colonel Maxwell. The Commission examined all the evidence placed before them by the Board of Fishery, and made a personal investigation at Loch Fyne and elsewhere. They found that the yield of the herring fishing in Loch Fyne had increased rather than diminished, when a period of years was considered, notwithstanding the use of the seine-net. "When we look back," they say in their report,‡ "to the records of the fishing in Loch Fyne for the last fifty or sixty years, we find many periods of bad fishing and gloomy depression on the part of the fishermen. In such times of panic they have always been ready to demand legislative protection against other classes of fishermen who were supposed to be interfering with their interests. Thus, in 1836, the Fishery Officer at Loch Fyne, expressing the views of the fishermen there, entreats the Board to protect that loch from ruin by putting down all fishing on the East Coasts of Scotland during the only months when it was productive, because the West Coast fishermen are persuaded that it is the fish of the West Coast which travel to the East Coast to spawn. In fact, every time that there is a panic the reasons assigned for the failure of the herring alter, but are strongly pressed upon the Fishery Board as demands for immediate prohibitory measures." The conclusion of the Commission was that the Acts were quite unnecessary and had been injurious, and that seining, or trawling, for herrings had not diminished the productiveness of the fishery in Loch Fyne, which, on the contrary, had increased. They expressed the opinion that if any legislation had been requisite, it should have been applied to a regulation of the size of the mesh of the seines, which were frequently under the legal standard, and they recommended that the Board of Fisheries should have discretionary powers to prohibit seining for herrings in waters which are too narrow for that method and drift-net fishing being peaceably carried on together, as in Upper Loch Fyne, above Otter Spit, and in the Kyles of Bute, but these powers should be enforced merely as a matter of police.

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* "An Act to Amend the Law relative to the Scottish Herring Fisheries," 23 and 24 Vict., c. 92.

† "An Act to make further Provision for the Regulation of the British White Herring Fishery," 24 and 25 Vict., c. 72.

‡ Report of the Royal Commission on the Operation of the Acts relating to Trawling for Herring on the Coasts of Scotland, 1863.

Another Royal Commission reported on the subject a few years later. It was composed of Sir James Caird, Professor Huxley, and Mr. G. Shaw-Lefevre. In 1864 they visited the Clyde districts, and in their report* they said—"We are unable to find any satisfactory proof, in the evidence that has been brought before us, that trawling or circle-net fishing for herrings is, when properly practised, wasteful, or destructive to the brood and spawn of the herring. We are of opinion that it has been and may be a very important means of supplying the market with an abundance of fish, and that, not unfrequently, under circumstances which preclude the capture of herrings by the drift-net fishermen." They pointed out that it was perfectly clear that there are times when the "trawl" will take fish when none can be caught by the drift-net. They declared their opinion that, except in a certain specified locality (Upper Loch Fyne and the Kyles of Bute), no justification whatever existed for the suppression of seine-net fishing for herrings, and they recommended the repeal of the Acts.

It appears that the firm enforcement of the Acts by the Board of Fisheries had brought about a change in the opinions of the fishermen themselves, who, when the drift-net failed to take the herrings they knew to be present in the loch, were prevented from using the seine by which they might have been caught. By an Act passed in 1867† it was made lawful to fish for and take herrings and herring fry at all places on the coasts of Scotland, in any manner of way, and by means of any kind of net having meshes not less than the regulation size of one inch from knot to knot, and the sections in the Acts of 1851, 1860, and 1861 which referred to seine-net fishing for herrings were repealed by the Sea Fisheries Act of 1868.

The restoration of the liberty to use the seine-net was received with great satisfaction by the fishermen generally. They had petitioned that the liberating Act might be hastened, and when intelligence was received in July, 1867, that the Act had received the royal assent there was much rejoicing. The fishermen in Upper Loch Fyne, who had been the most resolute opponents of seining some years before, provided themselves with seine-nets, the fishing was carried on throughout the season almost entirely with such nets, and the Officers reported that there were no complaints of any kind. Except for a short period in September, scarcely any drift-nets were employed, and then mostly because the men were not possessed of seines. They were, moreover, singularly unsuccessful, catching hardly any herrings.

In the season of 1868, however, a change occurred. When the fishing opened, and for a few weeks afterwards, seines alone were used, but then it was found that the drift-net was more successful than the seine, and as the season advanced more and more of the boats put aside the seines and employed drift-nets, which continued the more successful until the end of the year. The reason given by the Fishery Officer was that the herrings kept more than usual out in the deep water, where at that time the seine-net could not be well used. In 1869 the fishing began in the same way and drift-nets gradually replaced the seines. At the end of June 190 boats used seine-nets and 51 drift-nets; by the middle of July, half the fleet of boats were using drift-nets; in the middle of August, 285 boats employed drift-nets and 167 seines; by the end of August, 270 boats used drifts and 128 seines. In September, however, heavy catches began to be got by the seines, and for a week or two these nets were chiefly employed. In the seasons of 1870 and 1871 the drift-net was also more successful than the seine, and was much more used.

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* Report of the Commissioners appointed to inquire into the Sea Fisheries of the United Kingdom, Vol. I., 1866.

† "An Act to Alter and Amend the Acts relating to the British White Herring Fishery, 1867," 30 and 31 Vict., c. 52.

Fishermen thus became accustomed to use either the seine-net or the drift-net according to which was the more profitable, and harmony prevailed among drifters and seiners so long as herrings were abundant and the fishing successful. The year 1868, the first year since 1851 in which the use of the seine-net was lawful throughout the whole season (although, as just stated, the drift-net was chiefly employed), the yield of the fishery was very high, amounting for Loch Fyne to 39,795 crans, or about 139,280 cwts. From that year to 1873 and 1874 there was a gradual decline in the productiveness of the Loch Fyne herring fishery, and, although, as mentioned above, the drift-net was mostly employed, the seine-net began again to be held responsible for the falling-off in the catch. In 1874 the local Members of Parliament (the Marquis of Lorne for the County of Argyll, Mr C. Dalrymple for the County of Bute, and Sir William J. M. Cuninghame for the Ayr Burghs) undertook an enquiry with a view to ascertain, if possible, what had occasioned the decline. They were attended by the Assistant Inspector of Fisheries (Mr George Reiach), and visited the different localities, collecting the opinions of fishermen and others, and they submitted a report to the Government in the following year.* They stated that they had examined the antagonistic opinions of the drifters and seiners with great care, and by the light of all the information they could collect, and they were not satisfied that the "trawl-net," though possibly in some cases a destructive and wasteful engine of fishing, was the cause of the evil. The fact could not be explained away that the herrings were at that time disinclined to enter other narrow waters where "trawling" was unknown. Other theories had been suggested to them—such as, that the temperature of the air or water or the amount of rainfall might have affected the fish injuriously, or that the natural food of the herrings might have failed from natural causes—for which theories, however, they thought the evidence was very slight. On the whole they were inclined to the opinion that the fishing had been carried on to too great an extent in the narrow waters, and they recommended that steps should be taken to restrict it to a certain extent. They recommended that the annual close-time from 1st February to 1st June (which was established by the Act 28 and 29 Vic. c. 22, 1865) should be strictly enforced; that the weekly close-time should be extended so that, north of a line drawn from the Mull of Galloway to the Mull of Kintyre, it should begin at 6 p.m. on Saturday and last till midnight on Sunday; that the old regulation against daylight fishing should be renewed and enforced, and that the regulation regarding the dimensions of the mesh of herring nets, which was much neglected, should be enforced.

In 1877 another Commission, consisting of Mr. Frank Buckland, Sir Spencer Walpole, and Mr. Archibald Young, inquired into the subject of the Scottish herring fishing, including the use and effect of the seine-net in Loch Fyne. They came to the same general conclusions as the previous Commissions had done, expressing the opinion that "trawling" involved little, if any, more waste than drift-net fishing. They also agreed that, as a mere matter of police, it was desirable to give power to prohibit the use of the seine in Upper Loch Fyne and in other narrow waters less than one mile wide.

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* Report by the Commissioners of the Fishery Board for Scotland of their Proceedings in the Year ended 31st December, 1875, p. 3.

By the Sea Fisheries Regulation (Scotland) Act, 1895, power was given to the Fishery Board, by bye-law or bye-laws, to prohibit seine trawling within any area or areas within the limits specified in the sixth section of the Herring Fishery (Scotland) Act, 1889, or in the schedule annexed to it; and a bye-law was passed in 1901 prohibiting the use of the seine-net for herrings on Ballantrae Bank and neighbouring waters, as defined therein.*

While, as shown above, the seine-net is less effective at some periods than the drift-net, there is no doubt that, taken on the whole, it is the most successful method prosecuted in the Firth of Clyde, and its use has extended considerably in recent years.

The statistics showing the extent to which the various modes of fishing have been practised in the various districts in the Firth of Clyde do not extend very far back, but in the following Table the particulars are given for four of the five districts in the years 1899–1901, and for the five districts, and the whole area, in the years 1902–1906 :—

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* *Twentieth Annual Report*, Part I., p. 258.

District.	SEINE-NET.				DRIFT-NET.				TRAMMEL-NET.			
	Boats.	Men.	Crans.	£	Boats.	Men.	Crans.	£	Boats.	Men.	Crans.	£
1899.												
Ballantrae, -	32	...	977	356	90	...	1,183	1,658	22	...	757	751
Rothesay, -	18	72	2,000	2,223	77	218	1,968	2,187	...	...	...	...
Campbeltown, -	140	630	27,541	33,672	95	320	4,357	6,579	...	...	...	...
Inveraray, -	138	552	23,541	34,074	105	276	7,847	6,875	...	...	...	...
1900.												
Ballantrae, -	42	...	2,286	1,607	78	...	1,363	2,045	28	...	1,824	1,428
Rothesay, -	60	240	1,706	2,100	31	93	569	701	...	...	...	...
Campbeltown, -	200	900	37,652	48,145	64	192	2,905	4,230	...	...	...	...
Inveraray, -	156	624	19,794	30,589	97	239	4,949	5,691	...	...	...	...
1901.												
Ballantrae, -	84	...	7,302	5,522	72	...	1,432	1,465	26	...	1,816	1,850
Rothesay, -	42	140	1,443	1,650	30	68	391	470	...	...	...	...
Campbeltown, -	176	762	29,487	30,518	86	258	1,862	2,782	...	...	...	...
Inveraray, -	164	656	26,350	28,758	96	288	2,567	3,455	...	...	...	...
1902.												
Greenock, -	140	560	1,322	1,396	66	198	554	570	...	...	...	...
Ballantrae, -	56	224	3,469	3,562	73	219	2,916	3,337	49	147	1,652	2,120
Rothesay, -	261	1,015	25,306	13,748	20	60	743	709	...	...	...	...
Campbeltown, -	160	720	36,227	36,393	70	215	1,789	2,475	...	...	...	...
Inveraray, -	172	688	24,279	27,910	124	372	2,060	2,667	...	...	...	...
Totals, -	789	3,207	90,603	83,009	353	1,064	8,062	9,758	49	147	1,652	2,120
1903.												
Greenock, -	...	...	...	...	23	78	435	504	...	...	...	...
Ballantrae, -	50	250	234	193	70	210	1,765	1,845	31	93	245	282
Rothesay, -	253	1,047	25,689	17,314	86	270	2,672	2,236	...	...	...	...
Campbeltown, -	158	732	29,254	36,892	42	136	508	887	...	...	...	...
Inveraray, -	170	680	20,176	28,492	40	130	1,002	1,585	6	12	...	...
Totals, -	631	2,709	75,353	82,891	261	824	6,382	7,057	37	105	245	282
1904.												
Greenock, -	...	...	...	...	18	54	271	424	...	...	...	...
Ballantrae, -	30	150	299	185	66	198	620	946	13	39	529	381
Rothesay, -	210	846	6,920	8,035	30	90	620	923	...	...	...	...
Campbeltown, -	90	427	12,332	16,174	25	87	597	1,140	...	...	...	...
Inveraray, -	156	624	7,383½	14,811	38	122	374½	898	4	8	...	...
Totals, -	486	2,047	26,934½	39,205	177	551	2,482½	4,331	17	47	529	381
1905.												
Greenock, -	68	272	2,283	2,177	60	180	2,275	2,757	...	...	...	...
Ballantrae, -	...	...	...	..	75	225	4,479	4,938	1	3	...	...
Rothesay, -	136	504	1,328	1,189	18	54	410	426	...	...	...	...
Campbeltown, -	88	418	19,355	20,244	20	70	1,790	1,412	2	8	15	20
Inveraray, -	148	592	4,005	6,819	29	93	109	233	3	6	...	...
Totals, -	440	1,786	26,971	30,429	202	622	9,063	9,766	6	17	15	20
1906.												
Greenock, -	100	400	5,611	4,850	64	192	2,076	2,590	...	...	...	...
Ballantrae, -	70	350	10,250	10,495	68	204	2,552	3,678	51	153	2,897	3,227
Rothesay, -	300	1,036	8,830	8,396	100	307	4,879	5,820	...	...	...	...
Campbeltown, -	90	427	9,483	13,774	50	175	1,575	2,773	2	8	12	18
Inveraray, -	130	520	4,640	5,454	28	95	384	350	2	4	...	...
Totals, -	690	2,733	38,814	42,969	310	973	11,466	15,211	55	165	2,909	3,245

THE FLUCTUATIONS FROM YEAR TO YEAR.

The statistics relating to the herring fishery in the Clyde which are available are of two kinds—those which have been printed in the published Annual Reports, and those derived from the books of the Fishery Officers of the various districts. The former go back for a long period, nearly a century, to the year 1809, when the Board of British White Herring Fishery was established. They would, therefore, on this account be very valuable for the purpose of this enquiry if they had contained the information required. Unfortunately, those relating to the quantity of herrings taken or landed deal only with the cured fish, no note having been made until comparatively recent years of the quantity used in a fresh state. In the earlier part of the period it is probable that the proportion of herrings made use of in the non-salted condition, unless quite locally, was small; but in the later part of the period there is no doubt that it was very large, and included the greater portion of the catches. These statistics for each year from 1809 to 1906, and for each district as well as for the whole Clyde area, are given in Table I., p. 100, which shows the number of barrels of herrings cured on board vessels and landed in the district, the number of vessels on which the fish were cured, the number of barrels cured on shore, and the total number cured from both sources. During the period some changes took place as regards the limits of the various districts, as indicated in the Table, and one or two of them include parts of the West Coast not within the Firth of Clyde. Thus, the fishing at Islay from the year 1821 on wards was included in the Campbeltown district, while from 1850 to 1862 the whole of the returns referring to this district were included in the Inveraray district. Another example is the Stranraer district, which from 1821 on includes Dumfries, while in the period 1850–1862 the returns were included in the Greenock district, whereas after 1863 a new district of Ballantrae was formed which corresponded to the previous Stranraer district. It is also to be noted in regard to the barrels of herrings cured on board vessels that the statistics refer only to those which were landed in a district, and do not give any clue to the locality where the herrings were caught. In point of fact, the greater part of such herrings were taken outside the limits of the Firth of Clyde, and especially in the lochs of the West Coast further to the north. Still, with all these limitations the figures are instructive as showing in a broad way the progress of the herring fishery in the Clyde during the greater part of last century.

When the figures are arranged in decennial periods and the annual mean for each taken, the results are as shown in the following Table:—

	Cured on Vessels.	Cured on Shore.	Total Cured.
1809–1818	58,525	6,222	64,747
1819–1828	43,888	4,791	48,679
1829–1838	47,896	5,479	53,375
1839–1848	50,466	8,551	59,017
1849–1858	32,607	24,698	57,305
1859–1868	25,820	49,058	74,878
1869–1878	16,520	40,404	56,924
1879–1888	24,088	88,505	112,593
1889–1898	5,908	22,598	28,578
1899–1906	186	23,707	23,894

These figures show the gradual decline in the quantity cured on vessels and the increase of those cured on shore, but an examination of the Table giving the annual quantities indicates that after 1889 a change took place in the method of the returns, particularly in reference to the quantity given as cured on shore. Thus, in 1889 the quantity so cured was returned as 84,967 barrels, while in the following year it is given as 7,773 barrels. Before that date it seems that the herrings which were not cured were included in the totals—that is to say, the herrings which were sold fresh—but there is nothing to show for how many years previously this method was adopted. From another table (Table III., p. 108) which was published in the Annual Reports for the years 1843 to 1857, and which purported to show the total catch of herrings landed in each district, distinguishing those cured from those which were not cured, it appears that the latter were not included up to 1857, and the evidence of the detailed table indicates that the change was probably made in 1879, the herrings sold fresh being apparently included in the totals in that year and afterwards till 1889. There is, however, no certainty on the point.

The fluctuations in the quantities from year to year are shown in the detailed table (Table I.), and the minimum and maximum numbers of barrels cured in each decade are as follows:—

	Minimum		Total.	Maximum		Total.
	On Vessels.	On Shore.		On Vessels.	On Shore.	
1809–1818	32,261	1915	37,597	81,958	11,940	86,119
1819–1828	26,307	1484	30,044	68,159	10,421	78,581
1829–1838	40,134	1635	42,917	63,376	12,616	67,803
1839–1848	31,899	4441	43,519	72,494	13,630	81,036
1849–1858	19,353	14,960	40,423	51,804	34,367	75,560
1859–1868	16,591	20,848	38,988	41,634	113,955	138,053
1869–1878	6,089	25,294	32,408	36,619	83,794	119,095
1879–1888	2,906	60,477	69,433	46,818	136,057	182,875
1889–1898	—	1,483	1,483	18,166	84,967	103,133
1899–1906	—	21,031	21,031	591	37,360	37,600

The remark made above as to the inclusion of fish sold fresh among the cured herrings in some of the years applies also to this table; it is therefore uncertain how far the figures can be taken as showing the fluctuations in the yield of the fishery.

For the district of Inveraray, which is the chief one to which attention must be directed, a similar summary has been made, showing the average annual number of barrels cured in each decade since 1809, with the maximum and the minimum quantity for each of these periods. The Table is as follows:—

[Table.

Period.	Average Number of Barrels Cured.			Minimum Quantity of Barrels Cured in the Decade.				Maximum Quantity of Barrels Cured in the Decade.			
	On Vessels	On Shore.	Total.	On Vessels	On Shore.	Total.		On Vessels	On Shore.	Total.	
						Year.	Quantity.			Year.	Quantity.
1809-1818	1,959	4,354	6,313	396	1,688	1809	2,084	3,014	9,057	1815	12,034
1819-1828	1,673	1,830	3,503	381	998	1825	1,712	4,311	4,274	1819	6,766
1829-1838	925	3,506	4,431	354	1,453	1831	2,260	1,959	7,444	1838	7.904
1839-1848	3,066	4,568	7,634	303	2,922	1839	3,225	4,845	6,567	1846	10,003
1849-1858	3,930	21,059	24,989	450	11,804	1852	12,254	9,155	31,005	1851	35,325
1859-1868	2,979	27,669	30,648	412	13,593	1864	15,805	8,446	46,715	1862	55,161
1869-1878	7,205	12,859	20,064	1,098	5,785	1874	7,135	18,056	30,838	1869	39,214
1879-1888	15,039	19,328	34,367	10	6,754	1887	15,818	32,888	55,359	1882	84,854
1889-1898	476	4,887	5,363	...	116	1895	116	2,709	30,702	1889	30,702
1899-1906	7	1,648	1,655	...	184	1904	184	38	3,185	1903	3,185

At some of the enquiries which were held in former years as to the prosperity of the herring fishery in the Clyde and Loch Fyne, various statistics were submitted on behalf of the Fishery Board showing the fluctuations in the quantities of herrings taken over considerable periods. Some of them are for different series of years than those referred to above, and as they appear to have been derived from more detailed information than is available in the published Annual Reports, they may be here given. In the report of the Royal Commission on "Trawling" for herrings, published in 1863, it is stated that the general annual average of herrings taken in Loch Fyne for each five years from the year 1834 to 1862 was as follows:—

Years.	Average Quantity (Barrels).	Maximum.	Minimum.
1834–1838	17,869	—	—
1839–1843	20,119	—	—
1844–1848	15,427	17,610	13,816
1849–1853	19,149	32,726	10,630
1854–1858	25,744	31,423	16,999
1859–1862	42,165	79,893	20,246

In a more detailed return for the year 1844 to 1862, published in the same report, and also referring to herrings caught in Loch Fyne, the quantity cured is distinguished from the quantity used fresh, and the total for each year is given, as follows:—

Year.	Cured.	Used Fresh.	Total Caught.
1844	6,986	6,830	13,816
1845	6,923	7,825	14,748
1846	7,210	10,400	17,610
1847	4,403	11,000	15,403
1848	5,060	10,500	15,560
1849	3,759	12,115	15,874
1850	3,183	11,785	14,968
1851	9,884	22,842	32,726
1852	3,440	7,190	10,630

Year.	Cured.	Used Fresh.	Total Caught.
1853	4,399	17,150	21,549
1854	4,335	12,664	16,999
1855	7,550	16,811	24,361
1856	10,553	20,870	31,423
1857	7,910	18,912	26,822
1858	11,884	17,384	29,268
1859	10,046	17,118	27,164
1860	21,520	19,835	41,355
1861	8,344	11,902	20,246
1862	46,859	33,034	79,893

As the Commissioners pointed out, and as the averages above quoted show, the figures indicate a steady increase on the whole in the quantity of herrings taken, with the fluctuations which always occur in fisheries of this nature.

In the report of a later Commission which enquired into the herring fishery in Scotland, and which was published in 1878, will be found statistics showing the actual catch of herrings in Loch Fyne, *i.e.*, above Skipness Point, over a period of fifty years, from 1827 to 1876. The table was prepared by the late Mr. George Reiach, then the Assistant Inspector of Fisheries, from material which I have not been able to discover or trace, but probably from the books of the districts, which do not now exist. Unfortunately, the statistics are not given in detail for each year of the period, but only the average catch, the minimum catch, and the maximum catch, in decades. The Table is as follows:—

Years.	Average No. of Boats.	Average No. of Barrels.	Minimum Catch in Decade. Year.	Minimum Catch in Decade. Barrels.	Maximum Catch in Decade. Year.	Maximum Catch in Decade. Barrels.
1827–1836	300	3,469	1830	1,453	1832	4,898
1837–1846	350	7,388	1839	3,225	1846	9,400*
1847–1856	396	19,949	1852	10,630	1851	32,726
1857–1866	558	33,096	1864	16,131	1862	79,893
1867–1876	479	25,561	1874	6,934	1876	34,471

* The total for 1846 does not agree with that in the other Table given above.

The statistics showed that there was an increase in every succeeding decade except the last, which included the years of least productiveness, as described later. The Assistant Inspector also gave the catches for each of the ten years of this decade, 1867–1876, in Loch Fyne, above Skipness Point, as follows:—

Year.	Barrels.	Year.	Barrels.
1867 ..	40,964	1872 ..	11,358
1868 ..	46,813	1873 ..	8,166
1869 ..	43,088	1874 ..	6,934
1870 ..	26,716	1875 ..	15,097
1871 ..	22,005	1876 ..	34,471

Besides the statistics relating to the quantity of herrings caught or cured, another series of tables began to be published annually in the Fishery Reports in 1825, which may be cited as indicating the prosperity of the herring fishery in the districts of the Firth of Clyde. They refer to the number of boats and fishermen employed in what were termed the shore-curing herring and cod and ling fisheries, the number of fish-curers, and the total number of persons employed. The figures for each of the districts, and for the whole of the Clyde area, in each year from 1825 to 1906 are given in Table II., p. 104, and in the following Table the average figures for each decade are represented for the Inveraray district and for the whole of the Clyde districts.

Year.	Inveraray District.				Clyde Districts.			
	Boats.	Men.	Curers.	Total Persons.	Boats.	Men.	Curers.	Total Persons.
1825–34	378	1,120	63	1,598	1,394	4,446	238	7,232
1835–44	755	2,181	36	3,338	2,018	6,145	191	9,472
1845–54	1,241	3,850	65	5,429	2,511	7,710	218	10,980
1855–64	1,052	2,803	84	. .	2,180	5,853	186	. .
1865–74	1,052	2,352	101	. .	2,763	6,114	233	. .
1875–84	734	1,691	41	2,190	2,642	5,436	190	8,729
1885–94	481	1,115	20	. .	2,219	4,783	157	. .
1895–1904	317	874	16	1,241	1,692	3,419	68	8,899
1905	309	868	12	987	1,479	3,053	79	7,858
1906	301	829	20	1,061	1,451	2,930	85	7,968

In considering these statistics, however, it must be borne in mind that the limits of the districts were not always the same throughout the whole period, their extent in some cases being contracted or expanded according to the requirements of the industry, and it appears that such changes were not always explained in the earlier reports. In 1852, for example, there is a distinct fall in the various items of the table for the district of Inveraray, suggesting some re-arrangement of the limits, but the names of the various districts in the tables are unaltered, and no statement bearing upon the point is made in the report for the year in question, so that the matter remains in doubt. But it is stated in the report for 1840 that in that year the district of Fort-William and Tobermory, lying entirely outside the Clyde area, was combined with the district of Inveraray, an arrangement which seems to have lasted till 1869, in which year Fort-William appears as a separate district in the returns. Then in 1850 the district of Campbeltown, which included Islay, was combined with Inveraray district, from which it was again separated in 1863. In the table given above the figures for the last three decades represent the same limits throughout, and it will be seen that in the period there was a gradual but considerable decline in the number of boats and fishermen in the Inveraray district and in the Clyde as a whole. Thus, in the years 1875–1884 the average number of fishermen per annum was 1691, and the average number of boats 734 in the Inveraray district, whereas in the decade 1895–1904 the average number of fishermen was 874 and the average number of boats 317. For the whole of the districts of the Clyde combined the average number of fishermen in the former decade was 5436, while in the latter decade it was 3419, the average number of boats falling from 2642 to 1692. The figures for 1906, both for the Inveraray district and for the whole of the districts, are the lowest recorded.

As explained below, the Inveraray district includes some parts of the coast which are not within the limits of Loch Fyne, or indeed of the Clyde, being on the west side of Cantyre. It would be of interest to learn the variations within Loch Fyne itself, and there are some statistics which throw light upon the subject. In the report for 1855 a detailed return is given of the number of boats and men belonging to the various villages or creeks, from which it appears that the total number of boats within Loch Fyne was 390, the number of men being 1053, but it includes West Loch Tarbert, where, however, the numbers are very small. Along the coast from Ardlamont to Kilfinan there were 80 men and 30 boats; at Lochgilphead, Ardrishaig, and Inverneil there were 91 boats and 171 men; at East and West Tarbert there were 80 boats and 283 men, making altogether for the Lower Loch, that is, below Otter Spit (and including the few at West Loch Tarbert), a total of 201 boats and 533 men. The totals for Upper Loch Fyne, above Otter Spit, were 189 boats and 520 men, distributed as follows:—East Otter to Newton, 15 boats and 38 men; Leachk, Balure, Strachur, Poll, Cairndhu, and Dunderaan, 37 boats and 104 men; Inveraray, 20 boats and 50 men; Kenmore to Douglas Water, 8 boats and 20 men; Crarae, Sandhole, and Furnace, 36 boats and 104 men; Inverae and Sheep Point, 26 boats and 64 men; Lochgair, 19 boats and 52 men; West Otter and Silvercraigs, 28 boats and 88 men.

No similar return was published till 1886, after which, with the exception of 1887, when it was omitted, it appeared in each of the annual reports. The grouping of the creeks or villages differs, but in the following Table the more important which remained unchanged are given, as well as the totals for the whole coast of Loch Fyne, arranged in means of five-yearly periods:—

Years.	Tarbert.		Ardrishaig.		Lochgilphead		Inveraray.		Lochgair.		Totals.	
	Boats.	Men.	Boats.	Men.	Boats.	Men.	Boats.	Men.	Boats.	Men.	Boats.	Men.
1886	140	350	110	212	56	106	13	10	22	56	491	1,073
1886-90	132	359	89	216	48	107	11	10	19	41	422	1,000
1891-5	119	363	77	221	42	100	11	13	14	34	365	942
1896-1900	86	318	72	197	29	84	10	14	10	29	278	806
1901-5	97	332	70	197	23	79	13	20	9	30	286	831
1906	94	336	68	186	17	70	13	20	7	20	266	787

There has occurred, therefore, a decrease in both boats and men along the shores of Loch Fyne; the decrease in boats, although more pronounced, is less important, since they are now larger than they used to be, and the decrease in men is less marked than on many other parts of the coast of Scotland within the same period. The diminution has taken place more particularly at the smaller creeks, especially in Upper Loch Fyne, where the number of fishermen has been much reduced. Thus, taking the years 1855, 1886, and 1906, and contrasting the figures for the upper with those for the lower loch, we have the following:—

	Upper Loch.		Lower Loch.	
	Boats.	Men.	Boats.	Men.
1855 ..	189	520	201	533
1866 ..	127	281	364	792
1906 ..	74	156	192	631

On the east side of Lower Loch Fyne the decrease has also been pronounced. In 1855, as we have seen, there were 30 boats and 80 men between Ardlamont Point and Kilfinan; in 1832 there were 32 boats and 58 men on the same stretch of coast; while in 1906, along the coast from Ardlamont to Otter Spit, further north, therefore, than Kilfinan, there were only two boats and three fishermen.

Notwithstanding the decrease in the number of boats and fishermen on the shores of Loch Fyne, the quantity of herrings landed has on the whole increased, as is explained below.

THE DETAILED STATISTICS, 1854–1906.

The second class of statistics to which reference was formerly made are more detailed, though they do not go back so many years. They consist of the weekly records of the fishings in the various districts compiled at the time by the Fishery Officers in charge, the books containing them having been put at my disposal. The information noted includes the number of boats fishing, the number of crans of herrings landed, and usually the quality of the fish, the prices current for them, the condition of the weather, the chief locality or localities where the fish were caught, and any other circumstances that the Officer thought worth while recording.

Detailed information of this kind extending over a period of years is obviously of value, and these statistics are undoubtedly of value for the purposes of this enquiry. There are, however, some defects which impair their utility. One of the most important is that it is rarely that the weekly returns are recorded throughout the whole year, or over the whole period when herrings are being taken or landed in the district. The entries usually begin with the commencement of the summer fishing, in June or later, the catches for the preceding months being slumped together as a "total for the year up to date." In many cases this omission to specify the catches as they occur is of little importance, the quantities being small. But in other instances the quantity slumped bears a considerable proportion to the whole, and may even form the bulk of the yield for the year. This happens often in the records for the Ballantrae district, where the yield of the winter and spring fishings, as a rule by far the most important, may be merely totalled at the beginning of the summer fishing. The same method is often a marked defect in the records for Campbeltown district, as much as 12,000 crans being slumped in this way for the spring and early summer; and it is in this district that detailed information throughout the year, and particularly at the period of the season in question, is most to be desired. In the Loch Fyne district the influence of this process of slumping is not so great, but it is sometimes noteworthy, as in the period 1855–1859, and after 1893; it also exists in all the other districts.

Another defect is that the place of capture or of landing is not always given. Three of the districts include places outwith the Clyde area. Thus Inveraray includes part of the western coast of Argyll; Campbeltown includes Islay and Jura; and Ballantrae includes the Scottish coast of the Solway. The influence on the statistics of the inclusion of the western part of Argyll in the Inveraray district would be small; but such as it is, it has been almost quite eliminated in the compilation of the tables, the particulars necessary to do so being, as a rule, given in the books. The figures may, therefore, be taken as substantially representing the take of herrings in Loch Fyne. In some years Islay was a very important part of the Campbeltown district, large quantities of herrings being taken there. In nearly all cases they have been discriminated and deducted; in a few instances there is some doubt; but here also the figures substantially represent herrings taken from the waters of the Clyde.

It has not, however, been possible to subtract the herrings taken in the Solway from the totals for the Ballantrae district, the particulars being usually insufficient to allow that to be done. The figures for this district thus include a certain quantity of herrings which were caught outwith the Clyde. The amount of this quantity and its proportion to the whole may be estimated from the particulars which are given for certain years, which are taken at random from the books. Two groups of five years each were taken, and the quantities of herrings (in crans) landed in the district and outside the limits of the Clyde separated as follows:—

Year.	Landed in District.	Landed outside Clyde.	Percentage.	Year.	Landed in District.	Landed outside Clyde.	Percentage.
1883	25,001	228	0·9	1897	1,748	250	14·5
1884	18,323	272	1·4	1898	1,316	29	2·2
1885	23,580	345	1·4	1899	2,978	57	1·9
1886	6,885	989	14·3	1900	5,480	26	0·4
1887	11,751	97	0·8	1901	10,537	36	0·3

Thus, in the years 1883–1887, of a gross quantity of 85,540 crans of herrings landed in the Ballantrae district, 1931 crans, or 2·2 per cent, were landed at creeks and villages outwith the Clyde; in the years 1897–1901, of a gross quantity of 22,057 crans landed, 398 crans, or 1·8 per cent., were landed outwith the Clyde. The percentage for the ten years is 2·1, which is small; but the variation, as shown in the table, ranges from 0·3 per cent. to 14·5 per cent., an amount which requires to be taken into account in considering the fluctuations in the district, but which can have but little influence on the figures for the Clyde as a whole. The herrings from the non-Clyde creeks, it may be added (Portpatrick, Portlogan, Drummore, Sandhead, Glenluce), are caught in summer, and mostly in June and July.

Besides this, it would be of importance if the locality where the bulk of the fish were caught, or where the fishing was mainly prosecuted, in each week were always given. In Inveraray district, for example, it is of value to learn whether the herrings were taken for the most part in the upper loch or in the lower loch at any particular period. In the Campbeltown district it is of equal importance to know if they were taken in Kilbrennan Sound or to the south or east of Arran. As a rule this information is afforded more or less clearly in the records, but often it is not, and its absence makes it difficult to follow the movements of the shoals of herrings from one part to another in such districts or years. Nevertheless, the information given on this head will be of importance when the subject of the migrations of the herring is dealt with.

Finally, it is to be noted that the weekly records are not always or necessarily strictly accurate, although they generally are. They are compiled by the Officers from the statements supplied by the fishery correspondents at the various creeks or villages, and from the buying steamers, by far the greater part of the herrings taken in Loch Fyne and the Clyde generally being carried away directly from the boats on the grounds by steamers which forward them to the Glasgow market. It sometimes happens that corrections require to be made as to the quantities, which is generally done at the end of the month, or at the end of the year, without the record for any particular week being altered. The totals for the districts, as given in the appended tables, do not, therefore, always correspond with the totals in the annual reports, for the reason just mentioned, and because the herrings landed in certain districts but taken outside the Clyde area are deducted.

The tables give the weekly catches of herrings in each of the districts of the Clyde, as well as the number of boats fishing, and in other tables a summary of this information is given under each month of the year. These particulars are also represented in a series of Plates showing the monthly and annual quantities for the various districts and for the whole Clyde. With regard to the number of boats fishing, it is necessary to say that the number for any given week usually represents the maximum number employed in the fishing on any one night in that week; it does not represent the number of "voyages" or "trips" for the week—that information not being given in the reports; and the number for any month is the total for the weeks in it. The information regarding the boats, therefore, while useful as showing in a general way the relation between the extent of the fishing and the quantity of herrings taken, cannot be made use of in a precise manner to show that relationship.

Rothesay District.

The limits of this district lie entirely within the area of the Clyde, embracing the coast from Roseneath Point, in Dumbartonshire, to Ardlamont Point, in Argyll. It thus includes the Kyles of Bute and a number of lochs, as Loch Long, Loch Goil, Holy Loch, Loch Striven, and Loch Riddon. It also includes the islands of Bute, Arran, the Cumbraes, and Inchmarnock. In 1906 the number of fishing boats pertaining to the district was 176, and the number of resident fishermen and boys was 247. The herring fishing is pursued usually between Bute, Arran, and Cantyre, in the Kyes of Bute, and Loch Fyne.

The weekly records go back to the year 1854, and they will be found detailed, as regards the quantity of herrings landed and the average number of boats fishing, in Table XXII., p. 127, while the quantities of herrings landed in each month of the various years, as far as they can be ascertained from the books, are given in Table XI., p. 116, and the total quantity for each year in Table XIII.

The gross quantity of herrings landed in the district in the 53 years 1854–1906 amounted to 469,848 crans, or about 1,644,400 cwts.; the fluctuations in the annual quantities varied from 480 crans in 1854 to 38,436 crans in 1865, the annual mean or average for the whole period being 8865 crans. In this district the quantity of herrings landed has, on the whole, diminished. In the first twenty-six years, 1854–1879, the annual average was 10,510 crans, while in the last twenty-six years. 1881–1906, the annual average amounted to 7220 crans, an annual average decrease of 3,290 crans. When the figures are grouped into ten-yearly periods, the average annual quantities for each decade are as follows:—

1854–56	1857–66	1867–76	1877–86	1887–96	1897–1906
2,552	13,497	12,006	4,405	7,269	9,040

When arranged in periods of five years, the annual averages for each period are these :—

	Crans.		Crans.
1854–56	2,552	1882–86	4,653
1857–61	3,600	1887–91	11,881
1862–66	23,395	1892–96	2,658
1867–71	19,484	1897–1901	2,601
1872–76	4,529	1902–06	15,479
1877–81	4,158		

When the annual quantities are represented in the form of a graphic diagram (Plate II.), the outstanding feature is the very high catches from 1864 to 1871, and especially from 1864 to 1867. In the eight years the total quantity landed was 207,470 crans, or almost half of the gross quantity landed in the fifty-three years, and the annual average was 25,934 crans. In the four years 1864–1867 the annual average was 34,721 crans.

The information contained in the officers' books in regard to the place of fishing in these years enables us to trace the movements of the shoals, and it may be said that the success of the fishing in all the successful years in this district depends on the shoals penetrating the Kyles of Bute from the south and entering Loch Riddon, and also the other lochs of the district, viz., Loch Striven, Loch Long, Loch Goil, and the Holy Loch.

The fishing in the district begins late, usually not till the end of June or in July, and in some years not till August. In the early months after it has begun, the herrings are chiefly taken on the coast of Arran, on the west side of Bute, in Kilbrennan Sound, and at the mouth of Loch Fyne, few or none being caught in the Kyles of Bute or the lochs of the district. In many years this is the state of affairs throughout the whole season. Thus, if we summarise the information for the successful years above mentioned, and for a year or two before, we have the following :— In 1862 the fishing began in the week ending 5th July, on the coast of Arran and the west side of Bute, trials in the Kyles and in Loch Long being rewarded with only a few dozen herrings. During the whole season the fishing was in these waters, in Kilbrennan Sound, and in Loch Fyne, only a few herrings being taken in the Kyles, the largest quantity being got in November and December, and the total for the two months was only 109 crans, a few of which were obtained in Loch Riddon.

In 1863 the fishing began on the week ended 27th June, on the Arran coast, Kilbrennan Sound, and the west side of Bute ; there was no fishing in the Kyles, but the fishermen reported that a considerable quantity of small herrings were to be seen about the Kyles. In July the grounds were the same, but they now included the area about Ardlamont Point and also Loch Fyne. There is no record of the place of fishing in August ; in September it was mostly about Ardlamont ; in October it extended up the Kyles to Tighnabruaich ; in November it was the same ; in the early part of December the fishing was between Tighnabruaich and Loch Riddon, and as the month advanced it was concentrated in Loch Riddon and the adjacent part of the Kyles, and the catches were good. The particulars as to the weekly catches and the number of boats fishing will be found in the table (p. 127). The totals for the last four months, in crans, were—September, 107 ; October, 231 ; November, 592 ; December, 2832, the total for the year being 4642 crans. At the end of December the herrings became scarce and the fishing ceased.

In 1864 the fishing began early in July, and was carried on at Arran and the west side of Bute during that month, none being got in the Kyles. There is no information for August and September, but at the end of the latter month the fishing was chiefly at Ardlamont Point and the west side of Bute, the catch up to the 24th September being 2240 crans. The shoals were now reported to be settling into the Kyles, and in October the fishing was carried on there and in Loch Riddon. In November great takes were got in these places; about the middle of the month the herrings were also found in Loch Striven, and at the end of the month they were very abundant there, and also at Port Bannatyne. The same conditions prevailed in December, the best fishing being in Loch Riddon and Loch Striven. Towards the end of the month the fishing fell off and the boats left, the fishing not being continued into January; and it is noteworthy that no mention is made this year of any herrings being taken in the more northern lochs of the district, as Lochs Long and Goil. In the various weeks in November and December the catches (in crans) were as follows:—

November.	December.
5,200	2,330
2,500	4,364
2,600	5,500
2,280	1,823
	2,614
12,580	16,631

As was customary, the successful fishing attracted boats from all parts of the Clyde, as many as 400 being sometimes engaged, and it is to be noted that at this time the seine-net, or "trawl," was not employed, but only the drift-net.

In 1865 the fishing began at the end of June, and only ten crans were taken up to 1st July. In July a few were got in Loch Riddon, but the grounds frequented were mostly Arran, Kilbrennan Sound, the west side of Bute, and Ardlamont. In August full information is not given, but it is noted that the boats were successful at Arran and Bute. About the middle of September the herrings set into the Kyles of Bute—a few weeks earlier than in the previous year—and at the beginning of October the boats were fishing as far up as Loch Riddon, but this fishing fell off, and from about the 21st October to 9th November most of the herrings were taken about Ardlamont and on the west side of Bute. At the latter date the fishing began again in the Kyles and Loch Riddon and so continued. By the end of the month herrings were taken in abundance in Loch Striven and at Port Bannatyne Bay, and in the beginning of December the fishing was more successful at these places than in Loch Riddon or the Kyles; the oldest fisherman at Port Bannatyne, it was said, did not remember such a fishing there. But on the 10th December the herrings left Loch Striven and Port Bannatyne Bay and the fishing was carried on at Loch Riddon and in the Kyles with great success, the enormous quantity of 6400 crans being taken in the last week of the year. On this occasion the fishing was carried on till the end of January in these places, but it fell off towards the end of the month, and all the boats had left by the beginning of February. The total for the year was the largest on record for the district, amounting to 38,436 crans. The weekly catches for the last five months of the year, and for January 1866, and the totals for each month, were as follows:—

August.	September.	October.	November.	December.	January.
650	218	1,650	15	3,800	2,000
800	220	3,000	400	2,700	2,500
750	1,720	2,000	2,400	3,600	2,000
1,600	600	300	2,084	6,400	660
742	..	..	2,087	..	300
4,542	2,758	6,950	6,986	16,500	7,460

In this year again only the drift-net was employed, the use of the seine being still illegal and the prohibition enforced, and no mention is made of a fishing in the more northern lochs.

In 1866 the summer fishing began in the week ended 7th July, and during that month the grounds were the usual ones—Arran, Kilbrennan Sound, and the west side of Bute. This was the case also in August, but towards the end of the month herrings were taken also at Ardlamont and in Loch Fyne. In September the fishing was still at the north end of Arran and Loch Fyne, but a little before the middle of the month the best catches were got at Ardlamont, though the gross quantity was not large. For a day or two about the 9th October a good fishing was got in the Kyles, but it fell away until the week ending the 27th, when the fishing was chiefly in the Kyles and Loch Riddon, and 920 crans were caught. In the early weeks of November the fishing was continued with much success at these places, and also in Loch Striven and Port Bannatyne Bay. In the week ended 24th November it is noted, for the first time, that a fishing had started in Loch Long, where 50 boats were engaged; but this fell off in the succeeding week. Early in December the fishing declined also in the Kyles and Loch Riddon, and it was believed the shoal had for the most part left, the weekly total going down to a few hundred crans. But in the week ended 29th December it is noted that a new shoal had entered the Kyles of Bute, and the fishing went on with success to the end of January, 1867, in Loch Riddon and the Kyles. Towards the end of January the shoals left Loch Riddon and the fishing was chiefly in the neighbourhood of Ardlamont and Kames Bay, at the entrance to the Kyles, and at Tighnabruaich, where the heaviest catches were obtained. Until the end of December a few boats continued to prosecute the fishing in Loch Long, but with little success, getting a few hundred herrings. The details for the weeks are as follows:—

August.	September.	October.	November.	December.	January.
452	372	120	3,500	500	2,300
790	100	1,962	3,800	900	2,000
566	..	96	4,999	800	2,860
341	107	920	1,800	3,500	3,800
306	..	..	1,600	..	1,800
2,455	579	3,098	15,699	5,700	12,760

The aggregate catch for the year was 35,297 crans, and only the drift-net was employed throughout the season.

In 1867 the fishing began unusually late, the first entry in the records being for the week ended 3rd August, when 70 crans were caught at Arran and Inchmarnock. During the rest of the month and in September it continued light and in the same waters. In October the grounds mentioned are the west side of Bute and Loch Long, where a few herrings were caught. On 19th October it was reported that some good takes were got with the seine in Loch Long, that there had been no fishing in the Kyles of Bute, but that a shoal was reported within Ardlamont Point. On 22nd October fishing set in in the Kyles, seines as well as drift-nets being now used. In November the fishing continued in Loch Riddon and the Kyles, and there was also a slight fishing in Loch Long and Loch Goil, which is a branch of Loch Long; but in the Kyles and Loch Riddon it fell off, and many of the boats left for Gareloch (in the Greenock district), where a good fishing was reported. In the first part of December the fishing continued to be poor in the Kyles and Loch Riddon, and was entirely by seines, and it fell off in Loch Long and the Gareloch, but a little was still done in Loch Goil. But about the middle of December the fishing began again to be very successful in the Kyles and in Loch Riddon, and large takes were obtained, only by seines, and this condition continued till the middle of January, 1868, when it fell off, the fishing closing at the end of the month, chiefly about Ardlamont and the west side of Bute. The catches in the various weeks were as follows:—

August.	September.	October.	November.	December.	January.
70	43	40	1,340	550	60
67	37	14	400	610	1,071
103	50	120	607	3,100	454
85	90	340	730	3,060	1,290
75	..	4,500	..	..	60
400	220	5,014	3,077	7,320	2,935

The total for the year was 28,791 crans.

In 1868 the fishing began in the week ended 25th July, at Arran, Inchmarnock, and between Bute and Arran. In August and September the grounds were the same; but from the beginning of September there was a fairly good fishing in Loch Long, where 18 boats were engaged. In October only a few hundreds of herrings were got in trials in the Kyles, better catches being taken near Ardlamont. In this month and in November many of the boats left for Greenock and the Gareloch, but a slight fishing was still carried on in Loch Long, and a few herrings were caught in the Kyles and Loch Riddon, but there was no appearance of a shoal. In December very little fishing was done in the district till about the middle of the month, when fair takes began to be got in the Kyles of Bute (part not specified), and in Loch Long and Loch Goil. In the week ended 19th December it is stated that the fishermen reported there was a great shoal of herrings in Loch Long, which they supposed to have come from the Clyde, that is to say, the Greenock district. The fishing in the Kyles fell away towards the end of

December, ceasing there altogether on the 28th, when 40 crans were taken. It continued, however, in Loch Long with seines and drift-nets till 20th January, and in Loch Goil till the end of the month. In this year, therefore, the shoals did not penetrate the Kyles of Bute to any great extent, while, on the other hand, they were present in the northern lochs in greater force than in the previous years. The quantities caught in the various weeks were as follows:—

August.	September.	October.	November.	December.	January.
182	320	180	..	80	1,500
53	130	200	..	..	1,200
57	60	400	160	1,350	400
13	50	150	68	1,904	250
..	..	..	..	1,300	..
305	560	930	288	4,634	3,350

The total for the year was only 9712 crans.

In 1869 there was a revival of the prosperous fishing. It began on 17th July, and up to the end of October it was carried on in the usual waters, the north of Arran, and at Ardlamont and the mouth of Loch Fyne; trials in the Kyles and Loch Long gave but poor results, and it was stated that the shoals had moved up into the Clyde. At the end of October fishing started in the Kyles and in Loch Long, and in November it improved at both places, and also in Loch Goil. At the beginning of December about 450 boats were fishing in the Kyles with both seines and drifts, the former being most successful, while about 50 boats were fishing in Loch Goil with drift-nets. This condition continued till the end of December, the bulk of the herrings being taken in the Kyles, the fishing in the northern lochs falling away; and in January the fishing went on in the Kyles till the end of the month. The number of crans taken in the various weeks are as follows:—

August.	September.	October.	November.	December.	January.
..	483	740	280	3,200	700
117	287	2,040	1,200	3,750	900
120	680	390	1,800	1,400	400
700	70	260	2,300	250	450
..	45	..	..	225	..
937	1,565	3,430	5,580	8,825	2,450

The total catch for the year was 24,093 crans.

In 1870 the fishing began in the week ended July 9th; trials made in this month and in the summer in the Kyles and lochs gave very poor results, most of the herrings landed being taken about the north of Arran. In October the fishing was chiefly about Ardlamont and the entrance to the Kyles, and this was also the case in November until the end of the month, when a fishing started in Loch Striven and Loch Long. At the beginning of December the fishing was chiefly in Loch Long, Loch Goil, and Holy Loch, but good catches were also got on the west side of Bute. The total for the first week was 4500 crans; and it would appear that on this occasion the herrings did not make their way up the Kyles, but moved up the east side of Bute. In the second week of December the fishing in Loch Long was fair but partial, but heavy takes were got by seiners on the west side of Bute, one Tarbert crew getting a haul of about 500 crans, for which they received several hundred pounds. Towards the end of the month the fishing was mostly in Loch Long, Loch Striven, and in the channel between Dunoon and Wemyss Bay, and in Jannary in Loch Long and Loch Goil, from which the herrings moved out in the latter part of the month, and the fishing came to a stop. The catches in the various months were as follows:—

July.	August.	September.	October.	November.	December.	January.
1,370	1,090	1,133	1,050	2,141	9,000	4,260

In 1871 the fishing began in the week ended 24th June, and in this year the herrings were taken up to the end of July chiefly in the Kyles of Bute, Loch Striven, and Loch Long; also on the west side of Bute. From this time to near the end of November the fishing was chiefly in Kilbrennan Sound and between Arran and Skipness Point, trials made in the Kyles and lochs giving no results. But in the week ending 25th November a fishing sprang up in Loch Goil and Loch Long, the catch for the week amounting to 1200 crans. In the early part of December the fishing continued to be good in these lochs, and also in mid-channel between Dunoon and Wemyss Bay; but though it kept up fairly in Loch Long to the end of the month, most of the boats went off to Wemyss Bay and Greenock. In January, 1872, herrings were still obtained in Loch Long and Loch Goil, but the weather greatly interfered with the operations, and none were caught after the 13th. In this year again the herrings appear to have made their way to the northern lochs of the district by the east side of Bute. The quantity taken in each of the months was as follows:—

June.	July.	August.	September.	October.	November.	December.	January.
800	455	1,315	525	38	4,696	4,500	180

The total for the year was 16,589 crans.

In 1872, when the fishing began in the week ended 27th July, very few herrings were got in the Kyles of Bute, but from October on to the early part of January the chief fishing was in Loch Long and Loch Goil, some large takes being made with the seine—one seining crew at the beginning of December realising £420 for two nights' work in Loch Long. The shoals left these lochs about the middle of January. The total catch for the year was only 9135 crans, and the monthly takes as follows:—

July.	August.	September.	October.	November.	December.	January.
80	740	720	880	4,290	2,245	170

In 1873 the herrings did not visit the Kyles of Bute or the northern lochs, and the total for the year was only 3151 crans, less than was sometimes taken in a single week, which were chiefly obtained at Arran.

The last herrings landed in the district were five crans in the early part of November, which were caught off the Ayrshire coast. The fishermen, it is noted, did not remember any season when the herrings were so scarce in the later months of the year. The monthly totals were as follows:—

June.	July.	August.	September.	October.	November.	December.
50	704	368	1,218	626	15	—

From 1873 to 1887 the annual yield of the district was small, and few or no herrings were taken in the Kyles or the lochs. In that period the best year was 1880, when 8829 crans were caught, and the records show that the great bulk of the fish was obtained at Loch Ranza, Arran, and in Kilbrennan Sound. Still a fair, though not large, fishing was carried on by the smaller boats in the Kyles of Bute and Lochs Long, Goil, Striven, and Riddon at the end of June and in July, and some herrings were taken in Loch Striven in October.

From 1887 to 1891 the yield was higher, especially in 1890, when the aggregate was 18,749 crans, the annual average for the five years being 11,881 crans. In 1887 the fishing began in the week ended 9th July, in the Sound of Kilbrennan, off Ardlamont, and in the Kyles, as well as Lochs Striven and Riddon, and fishing was also prosecuted in Loch Long. But throughout the year the principal fishing area was in the neighbourhood of Skipness, between Arran and Bute, and in Kilbrennan Sound, practically all the herrings got in the later months of the year being obtained about Machrie Bay, Arran. The total for the year was 10,376 crans.

In 1888, when the total was 9919 crans, the fishing began favourably in the week ended 30th June, in Lochs Long, Goil, and Striven. The Officer noted that the fishing in Loch Long was the most successful for many years there, and that there was every indication of a large shoal of herrings having passed up the Clyde. In the week ended 14th July it is stated that the fishing in the lochs had been very successful, the catch in Loch Striven being 331 crans, and in Loch Long 400 crans, all large, fine fish. The fishing in Loch Riddon and the Kyles was also successful. In August, though herrings were still being got in the lochs and in the Kyles, the fishing was chiefly in Kilbrennan Sound; a few were obtained in Loch Striven in September. But after this the herrings were caught in Kilbrennan Sound, Machrie Bay, and off Skipness and Ardlamont till the season closed early in December. In 1889, the fishing began at the end of June in Lochs Striven, Long, and Goil, and also on the west side of Bute, and off Garroch Head. The loch fishing was slight in July, but early in August it was successful in Loch Striven and the neighbourhood of Rothesay, and there was a fair fishing in the Kyles and Loch Riddon. After this the fishing in Lochs Long and Goil fell off, and though herrings continued to be taken in Loch Striven and the Kyles, the chief fishing was to the south off Ardlamont and then off Skipness. The total for this year was 8849 crans.

In 1890, when the aggregate totalled 18,749 crans, the fishing again began in the week ended 21st June, in Lochs Striven, Long, and Goil; it continued there and also in the Kyles and at Arran during July, falling away in the lochs as the month advanced. In August the chief fishing place was off Ardlamont, where the great bulk of the fish in this month were obtained, but herrings were also taken in the Kyles of Bute, Loch Riddon, and at Arran. In September the most productive area was also at Ardlamont, but herrings were also taken in the Kyles, Loch Riddon, and the neighbourhood of Port Bannatyne. During the rest of the year most of the herrings landed were caught at Ardlamont, Skipness, and on the Arran coast, the season closing in the early part of December. The catch in each month was as follows:—

July.	August.	September.	October.	November.	December.
6,002	8,612	2,548	515	593	145

In 1891, when the aggregate catch was 11,513 crans, the fishing opened in the week ending 27th June, the Officer reporting that there had not been such a successful fishing in the Kyles of Bute and Loch Riddon for the previous twenty years as in the past week, and conjecturing that the shoal which usually visits Loch Striven had this year entered the Kyles. The catches in Loch Long and Loch Goil were also very good. But in the following week the fishing declined in these localities, and the fishermen turned their attention to the Arran waters, where, until the end of September, most of the herrings were taken, but a small fishing went on in the Kyles and Loch Riddon. In October the most productive localities were off Skipness Point and the Sound of Kilbrennan, and in November also Ardlamont and Kames Bay.

As may be seen from the tables, the yield from 1892 to 1901, inclusive, was very small, the annual average for the ten years being 2629 crans, but in 1902 and 1903 there were again great takes of herrings in the district.

In 1901, when only 1825 crans were landed, the catches were made chiefly about Skipness Point, Inchmarnock, and Ardlamont, it being stated that the fishing in the lochs was a complete failure, and the last herrings of the season were landed on the 12th October.

In 1902, when 26,049 crans were landed, the information as to the locality of fishing is, unfortunately, defective for the earlier part of the season, but it appears that in August some herrings were obtained in Loch Striven and in the Kyles. At the end of October the bulk of the herrings were taken off Garroch Head, at Inchmarnock, and in the Kyles of Bute. In the week ending 8th November all the herrings landed, 2808 crans, were caught in the Kyles of Bute, where fishermen reported a "fine appearance" of herrings. In the succeeding weeks they were still plentiful in the Kyles and in Loch Riddon, and a very successful fishing was carried on there until the end of January and into the first week of February, when it ceased. In one week in November the 216 boats fishing caught 5219 crans, the totals for the various months of the season being as follows:—

July.	August.	September.	October.	November.	December.	January.
624	560	224	2,705	12,344	9,147	7,131

In 1903 the catch was still greater, viz., 28,361 crans. Up to the end of August the takes were light, the herrings being got chiefly about Skipness Point, and very little was got in Lochs Riddon and Striven. At the beginning of September a large shoal appeared between Inchmarnock and Ardlamont Point, apparently making for the Kyles of Bute, and till the end of September large hauls were got there and between Inchmarnock and Garroch Head. The shoals did not enter the Kyles till about the middle of October, their movements being described as very erratic, a circumstance which was attributed by some to the use of seines in these narrow waters. From the latter part of October and in November the catches fell off, especially those of the seiners, the herrings, though known to be abundant, not rising to the surface, which was ascribed to the prevalent wet weather. Ground-nets, or so-called "trammels," were largely used, with success, as well as drift-nets. In the week ended 12th December a good fishing was got (2607 crans) by the three modes in the Kyles and Loch Riddon. In the succeeding weeks seines were most successful, but as the market was glutted and prices fell the fishing became slack, and the last herrings were taken on 26th December. It appears, however, that the fishing was resumed in January, because the first entry in the records for the next year is 2843 crans for the winter fishing, and though no details are given as to the weekly catches or the place of fishing, it may be surmised to represent the fishing in January in the Kyles and probably Loch Riddon. The quantities for the various months were as follows:—

July.	August.	September.	October.	November.	December.	January (?)
413	351	3,327	2,944	2,717	10,897	2,843

In 1902–1903 there was thus a repetition of what took place 36 years before, but in the later case the shoals of herrings did not apparently penetrate to Loch Striven and the northern lochs, as mention is not made of any fishing north of Loch Riddon. The fishing, moreover, in 1904 fell to 7540 crans, and to 1738 crans in 1905. In 1904, herrings entered the Kyles at the end of September, and a fair fishing was got between Ardlamont Point and Tighnabruaich, and in the first fortnight of October in Loch Riddon also. The herrings disappeared after this in the Kyles until December, when a few hundred crans were caught. In 1905 the Officer reported unusual quantities of mackerel as being caught in July and August especially, and practically no fishing took place in the Kyles.

In 1906 the aggregate catch was again above the average, amounting to 13,709 crans; but in this year the successful fishing was due, not to the herrings having come into the Kyles or the northern lochs, but to their congregation on the east side of Arran, and especially in Brodick Bay and neighbourhood, a position not recorded in any previous year. In August, and still more in September, great catches were made in that locality. In the early part of October the shoal shifted northwards, and in the week ended 13th, 3218 crans were taken in the vicinity of Inchmarnock, at the mouth of the Kyles, to which it was supposed the herrings were moving. Stormy weather followed, and the herrings disappeared, and the quantity taken in the remaining months was very small, and mostly in Loch Striven, but also in Loch Riddon and on the Ayrshire coast. The catches in the various months were as follows:—

June.	July.	August.	September.	October.	November.	December.
133	416	2,754	6,070	3,904	72	197

Greenock District.

This district comprises the upper part of the Clyde, including the coast of Dumbartonshire on the north, the coast of Renfrewshire, and the northern part of the coast of Ayrshire as far as, but not including, the port of Ayr. It thus includes the estuary of the Clyde and the Gareloch, and on the Ayrshire coast the ports of Troon, Irvine, Saltcoats, Ardrossan and Largs. In 1906 there were 195 boats and 256 fishermen and boys belonging to the district. The statistical records in the Officer's books go back to the year 1855, but it is to be noted that at that time, and up to and including the year 1862, the limits of the district were much greater, comprising the coast right round to the upper parts of the Solway. In 1863 the coast from (and including) Ayr southwards was formed into the district of Ballantrae, referred to below. The tables referring to the district will be found appended (pp. 115, 127).

The gross quantity of herrings landed in the district in the years 1855–1906 amounted to 141,098 crans, or about 493,850 cwts., giving an annual average quantity of 2713 crans. The annual fluctuations ranged from 182 crans to 33,640 crans. In the first half of the fifty-two years, 1855–1880, the quantity of herrings landed in the district was 97,819 crans, giving an annual average of 3760 crans; in the second half, 1881–1906, the aggregate quantity was less than half of this, viz., 43,279 crans, the annual average being 1660 crans. Taking the period from 1863, since the district had the limits it has at present, the aggregate quantity landed was 141,098 crans, the annual average for the forty-four years being 2807 crans. In the first half of this period, 1863–1884, the quantity landed was 88,722½ crans, the annual average being 4033 crans; in the second half, 1885–1906, the aggregate was 34,795¼ crans, the annual average being 1581 crans. The great difference was caused by quite an exceptional and abnormal fishing in 1868 and 1869, as explained below, when over 50,000 crans were landed. If these be deducted, then the average for the forty-two years falls to 1743 crans, and the average of the remaining twenty years of the first half of the period to 1920 crans, as compared with the 1581 crans for the last twenty-two years. The catch in this district has thus fallen on the whole.

Taking the whole period in groups of ten years, the annual averages are as follows:—

1857–1866.	1867–1876.	1877–1886.	1887–1896.	1897–1906.
2,318	6,472	1,634	1,587	1,689

And in five-yearly periods the averages are:—

1857–61	..	1,642	1882–86	..	1,864
1862–66	..	2,994	1887–91	..	2,077
1867–71	..	11,637	1892–96	..	1,097
1872–76	..	1,307	1897–1901	..	400
1877–81	..	1,404	1902–06	..	2,978

The table of the annual quantities landed and the curve representing them show that the years 1855, 1860, 1862, 1865, 1868, 1869, 1870, 1882, 1888, 1905, and 1906 were above the general average for the whole period, while the lowest years are to be found from 1896 to 1901.

Unfortunately, the records of this district, so far as the locality where the fish were caught is concerned, are very defective, particularly in the early years. From occasional notes, it may be surmised that there was usually a fishing in June and July in the earlier part of the period in Luce Bay and neighbourhood, but probably the chief fishing was on the coast of Ayrshire and over to the coast of Arran. In 1862 the summer fishing was on the Ayrshire coast, the total for the year being 5260 crans, the catches in the principal months being as follows:—

July.	August.	September.	October.
896	2,564	1,675	55

In 1863 no information is given. In 1864 the fishing appears to have been over at Arran mostly, and in November some were taken in Irvine Bay and Saltcoats Bay. In 1865 the summer fishing appears also to have been chiefly in the neighbourhood of Arran, but in November the herrings set in in great abundance to Irvine Bay, the oldest fisherman, it is said, not remembering such heavy catches with drift-nets as were then obtained, and the herrings were taken close to the shore and even in Irvine Harbour. The weekly catches may be given, the number of crans of herrings landed at the various ports being as follows:—

Week ended	Troon.	Irvine.	Saltcoats.	Ardrossan.	Total.
4 Nov. -	10	777	133	..	920
11 „ -	8	545	320	17	890
18 „ -	330	22	..	..	352
25 „ -	1	..	..	..	1
2 Dec. -	125		34	..	159
9 „ -	342		18	..	360
16 „ -	109		21	..	130
23 „ -	65		..	..	65
30 „ -	300	..	..	..	300
6 Jan. 1866	400	5	..	..	405
13 „ „	.	12	20	..	32

After the 13th January the fishing fell off, only a few hundreds of herrings being caught up to the end of the month. The totals for the various months for the district are as follows:—

June.	July.	August.	September.	October.	November.	December.	January.
24	249	1,200	232	113	2,322	855	437

In 1866 the summer fishing appears to have been mostly near Arran, and in November the herrings were again tolerably abundant in Irvine Bay, appearing about the same time, viz., 3rd November. Later in he month they were found in Ayr Bay. The fishing was continued to January 25th, but with less success, the weather being stormy. The monthly totals are these:—

June.	July.	August.	September.	October.	November.	December.	January.
38	580	506	37	132	927	67	309

The total for the year was 2724 crans.

There is no information for 1867, except that on 14th December it is said that "the winter fishing on the Ayrshire coast has done little or nothing as yet," and no shoal appeared on the coast as in the two previous years. The total for the year was 1266 crans, of which 309 crans were taken in January, as above stated.

The year 1868 is a memorable year in the fishing annals of the Greenock district. In the summer the fishing was rather poor, and it was noted that there did not appear to be a shoal of any extent on the coast. The total quantity up to the beginning of October was 1425 crans. In the week ended 3rd October 80 crans were landed, the place of fishing being unspecified. On the following week 194 crans were taken, and the Officer (now a new one, Mr. John Bain) reported that upwards of 100 crans were landed at Greenock, from which place 20 boats were fishing, and he added—"On Friday and Saturday last (9th and 10th October) the fishing in the Clyde was remarkably good. It is prosecuted opposite Greenock, and on Friday afternoon good takes were got farther up the Clyde, opposite Port-Glasgow." It is possible that the fishing in this locality had started a little before, and that part of the 80 crans recorded for the preceding week were caught there; but it can scarcely have begun before 26th September, when the previous Officer notes that the Ayrshire boats had been doing nothing as yet, and had gone to Loch Fyne.

As the season advanced the fishing in the estuary of the Clyde increased, and boats from other districts and from the East Coast were attracted to Greenock. The herrings were caught by seines between Greenock and Helensburgh, opposite Port-Glasgow, and sometimes as far up as between Greenock and Dumbarton, a very unusual occurrence. The number of boats increased to a maximum of 340 in November and December, and they fished day and night; the weekly catches increased to 6000 crans (or about 6,000,000 herrings) in November, and the Officer noted that, notwithstanding the great fleet of boats all using the seine-net—often improvised from drift-nets—busily engaged day and night amongst them, and steamers continually plying up and down, the shoal still remained in the narrow estuary, and seemed rather to increase than diminish. On 12th December he adds—"Notwithstanding that a considerable number of boats (up to 340) have been during the past *nine* weeks constantly engaged trawling for herrings in the Clyde in comparatively shallow water, the herrings appear to be as abundant as when the fishing commenced, evidently showing that trawling does not frighten away the herrings, as is sometimes alleged by those opposed to this mode of fishing."

Shortly after this, however, the fishing fell away. On 18th and 19th December very few herrings were taken, and the total catch for the succeeding week fell to 120 crans. It was believed that the fish had gone to Loch Long and Loch Goil, where, as stated above, a great fishing occurred. Towards the end of January a fishing revived opposite Greenock and was continued to the 27th, the last herrings being taken opposite Gourock, and it was supposed that the shoal was making its way down to the sea. The weekly totals for the district, and which refer to the fishing in the estuary, are as follows:—

Oct.	10	194	Nov.	7	2,496	Dec.	5	2,600
„	17	383	„	14	5,800	„	12	3,500
„	24	1022	„	21	6,000	„	19	3,000
„	31	1500	„	28	5,500	„	26	120
							31	20

The monthly totals for the district are these:—

July.	August.	September.	October.	November.	December.	January.
576	401	428	3,179	19,796	9,240	470

In the following year, 1869, in the belief that there were still herrings in the Clyde opposite Greenock, a few trials were made at the beginning of June, but none were caught. In this month and July the herrings landed were caught apparently off the Ayrshire coast, and it is noted on 10th July that the "appearance" of herrings on the coast was good. On the 4th September it is noted that 20 crans were taken on the grounds opposite Greenock, and the fishing continued here during the month, without, however, very great success. At the beginning of October it is stated that the principal fishing grounds were the banks between Greenock and Helensburgh, but that although numerous boats (161) were employed both night and day, the results were not yet encouraging. On the 18th October 70 crans were caught, and in the week ended 23rd 400 boats were prosecuting the fishing, and 3000 crans were taken. The herrings, the Officer noted, were scattered along the Tail of the Bank, and were got from the entrance to the Gareloch up to opposite Port-Glasgow. In the next week 6000 crans were taken by 478 boats, after which the weather became somewhat stormy and interfered with the fishing. Early in November the herrings began to get scarce, the weekly catch falling to 120 and then to 14 crans, and the fishermen were of opinion that the herrings had been driven from the Tail of the Bank by the great quantity of fresh water coming down the Clyde, and that when the water became clearer the herrings might return. At the end of November the fishing did, indeed, improve slightly, 844 crans being taken in the week ended 27th, but they were caught farther down the Clyde, opposite Gourock and Kilcreggan, though a few were still got opposite Greenock. In December a small quantity were taken, chiefly in the channel and down by Wemyss Bay and Gourock. In the week ended 8th January the fishing was at Largs and Fairlie, and between those places and the Cumbraes, and it appeared that the herrings were going farther and farther to sea; none were secured after that week. The total catch for the year was 16,670 crans, of which 470 were taken in January. The particulars for the months and the chief weeks are as follows:—

June.	July.	August.	September.	October.	November.	December.	January.
...	...	...	142	12	3,200	302	...
...	...	...	40	43	120	...	300
...	...	...	36	2,996	14	...	...
...	...	...	53	6,000	884	200	...
...	...	...	205	...	...	150	...
101	706	1,036	476	9,051	4,178	652	300

In 1870 the fishing on the Ayrshire coast, of the usual kind, continued till the end of August, when it began to fall off. In the first week of September two boats tried the grounds opposite Greenock, and got a few hundreds of very small herrings. In the next week about 40 boats got 70 crans, also very small fish, running about 1400-1600 to a cran, and so on throughout the month. In October the fishing in the district was almost entirely confined to Greenock; towards the end of the month it fell off, and very few were got at the Tail of the Bank afterwards, either in November or December: those taken in the latter month were caught farther down by Inverkip and Wemyss Bay and over towards the Cloch Lighthouse. The last entry is for the week ended 24th December, but 40 crans were landed in January, place not specified. In this year the total was only 4350 crans, of which 300 crans were obtained in January. The particulars for the months, and for the weeks during which the fishing was in the estuary of the Clyde, are as follows:—

June.	July.	August.	September.	October.	November.	December.	January.
...	...	...	66	40	64	598	...
...	...	...	4	20	68	150	...
...	...	...	113	20	...	200	...
...	...	...	60	22	108	100	...
...	...	...	75	...	...	...	...
552	1,146	644	318	102	240	1,048	40

In September, about 205 of the total crans landed were caught off Greenock; in October the quantity was 87 crans, the rest being got on the Ayrshire coast; in November 68 crans were got near Greenock, and 172 crans on the Ayrshire coast; in December, in the first week none were got at the Tail of the Bank, most coming from the entrance to Loch Long and the Holy Loch; in the second week about 104 crans were taken between Wemyss Bay and Inverkip, the rest on the coast of Ayrshire, and a considerable quantity of those taken in the next week were also caught near Inverkip.

In 1871 the grounds off Greenock were tried, and over towards Helensburgh in October, but only a few crans of herrings were obtained, the weekly catches being 6 crans, 10 crans, 4 crans. In the early part of November some herrings were taken on the Tail of the Bank, and this drew a number of boats to the place. The particulars of the weekly fishing on these grounds are as follows:—

	Boats.	Crans.		Boats.	Crans.
Oct. 7 -	12	6	Nov. 11 -	50	58
„ 14 -	10	10	„ 18 -	50	220
„ 21 -	4	4	„ 25 -	30	100
„ 28 -	..	..	Dec. 2 -	80	300
Nov. 4 -	8	8	„ 9 -	70	700

During the last week, while fishing was also carried on on the Tail of the Bank, a considerable proportion of the fish were taken between Gourock and Largs. No herrings appear to have been taken after this, and none were obtained in January.

In 1872 the total landed for the year was only 553 crans. Several trials were made at the Tail of the Bank in the latter part of the year, but with no success. The fishing in the following years was not very successful until 1882, and the particulars given as to the locality of fishing are scanty, but it appears generally to have been on the Ayrshire coast and towards Arran.

In 1882 the total was 3734 crans; such information as is given indicates that the fish were taken chiefly at Arran and about the Cumbraes: there is no mention of the Clyde estuary. In 1888 the aggregate was 3071 crans. In June and the early part of the season the fishing was chiefly in Gareloch, where the fishing is said to have been better than for many years. Later it was at Arran, especially about

Sannox, though there was again a slight fishing in Gareloch about the middle of September.

In 1905, when the aggregate was 4455 crans, the bulk was obtained in September and October, and the chief fishing places were in those months the waters between the Ayrshire coast and Arran.

In 1906 the total amounted to 7865 crans; there is an entry of 687 crans for winter fishing without specification of grounds. The herrings in August and September were chiefly caught on the east coast of Arran, in the channel between Ardrossan and Arran, and in Brodick Bay. In November there was a fishing on the coast of Ayrshire, but the quantity taken was small; later in the month it was farther up the coast, off Largs, and in the end of the month in Gareloch, where a considerable shoal of herrings appeared. In December the fishing continued with success in Gareloch, and apparently also in January, 1907, for the first entry for that year, on February 9th, represents 4844 crans as having been taken in the winter fishing to date. In February, 1907, the fishing took place off Greenock and in Largs Bay, and large quantities of herrings were taken. In March this fishing fell off, the last, 25 crans, being taken in the week ending March 9th. This then represents another incursion of shoals to the upper reaches of the Clyde. The quantities (crans) landed in each of the months are as follows:—

1906.

January(?)	July.	August.	September.	October.	November.	December.
687	141	1,304	1,630	451	2,014	1,638

1907.

January.	February.	March.
4,844	2,709	25

The catches by the week during the winter fishing in the upper waters are as follows, the first few entries representing the fishing on the northern part of the Ayrshire coast:—

Nov. 3,	38	Dec. 8,	377	Jan.	Feb. 9,	642	Mar. 9,	25
,, 10,	65	,, 15,	575	?	,, 16,	624		
,, 17,	417	,, 22,	168		,, 23,	1,276		
,, 24,	641	,, 29,	518		Mar. 2,	167		
Dec. 1,	853							
	2,014		1,638	4,844		2,709		25

It may be noted that a period of about thirty-seven years has elapsed since great shoals appeared in these waters.

Ballantrae District.

The limits of this district, as already stated, extend from and include the town of Ayr on the Ayrshire coast, round to the Solway, embracing the whole of the Scottish coast of the latter. In 1906 the number of boats belonging to the district was 346, while there were 587 resident fishermen and boys. As mentioned above, until 1863 this district was included in the district of Greenock, so that the statistics available are for the forty-four years 1863–1906. In this period the gross quantity of herrings landed in the district amounted to 398,689 crans (about 1,395,400 cwts.), giving an annual average for the period of 9061 crans. In the first twenty-two years, 1863–1884, the gross quantity of herrings landed was 228,592 crans, the annual average being 10,390 crans; while in the last twenty-two years, 1885–1906, the quantity was 170,097 crans, with an annual average of 7732 crans—showing, therefore, a considerable reduction in the second period. The annual average for each of the ten-yearly periods are as follows:—

(1857–1866 ..	2,129)	1887–1896 ..	8,566
1867–1876 ..	4,535½	1897–1906 ..	5,397½
1877–1886 ..	20,518½		

The first of these periods, of course, includes only four years. The annual mean quantity in five-yearly periods was:—

1862–66 ..	2,129	1887–91 ..	14,201
1867–71 ..	2,606	1892–96 ..	2,931
1872–76 ..	6,465	1897–1901 ..	4,412
1877–81 ..	24,088	1902–06 ..	6,383
1882–86 ..	16,949		

The variations from one year to another have been very marked in this district, the smallest quantity in any one of the years being in 1863, when the total landed amounted to 825 crans; the largest was in 1880, when the aggregate amounted to 37,600 crans. The great fluctuations in this district have been owing chiefly to the variation in the yield of the winter and spring fishing. The summer fishing, as a rule, is not of great account, and it is not at present worth while attempting to follow the movement of the fishing in detail. Suffice it to say that it begins usually in May, and in that and the following month is carried on generally on the Ayrshire coast, sometimes into August; the fishing then, as a rule, passes to the coast of Arran and about the south end of that island, and into Kilbrennan Sound later and the Argyllshire coast.

The great fishing is the winter and spring fishing on the coast of Ayrshire, which occasionally begins in November, more commonly in December, and it may not be till January, or even later. Shoals of herrings commence to congregate on the coast, sometimes in the southern part, off Loch Ryan and Corsewall Point, and sometimes in the northern part of the district, about Ayr Bay or neighbourhood. The fishing is then carried on mostly by trawl nets, or seines, and sometimes large catches are secured. In February, usually in the third week, the shoals settle down on the spawning grounds near the coast, particularly opposite Ballantrae, and great quantities of herrings may be taken in February and March. The fishing closes in March as a general rule, though occasionally a small quantity is got at the beginning of April near the shore.

The chief bank on which the herrings spawn is of an irregular elongated form, and lies off the coast between Bennan Head on the north and a point about three miles south of the village of Ballantrae. It begins about one mile from the shore and extends to over three miles from it, the depth ranging from about six to thirteen fathoms, and the bottom is formed chiefly of stones, gravel, and coarse sand. The spawning is not, however, always and not perhaps usually confined to this area. An elevation of the bottom, with depths from six or seven to fifteen or sixteen fathoms, extends along the coast from near Girvan to

Loch Ryan, and herrings appear to spawn in the neighbourhood of the banks, although the Ballantrae Bank is by far the most important locality, and it is here that the herrings are chiefly obtained from the middle of February to the end of March.

As this fishing is an important one, I have prepared a table, so far as the information is available, showing the quantities taken in the different months in the various years. The statistics for the "winter" fishing in the Greenock district from 1855 to 1862 (after which Ballantrae was separated) show the following, but it is unknown where the herrings were taken:—

1855	1,391 Crans (to 23rd June).	1859	52 Crans (to 18th June).
1856	70 „ „ 14th „	1860	17 „ „ 9th „
1857	15 „ „ 13th „	1861	50 „ „ 22nd „
1858	7 „ „ 5th „	1862	4 „ „ 7th „

These figures show, at all events, that the winter fishing in these years at Ballantrae Banks or neighbourhood was small, and it is to be noted that a close-time which was established in 1860,* from 1st January to 31st May, for the stretch from Ardnamurchan to the Mull of Galloway, put a stop to the spring fishing on this coast. By another Act of 1865,† the close-time was altered to the period from 1st February to 31st May, and it was made subject to the Sea Fisheries Act of 1868, and has never been enforced. It is stated in the report of the Commissioners of 1877 that seining for herrings commenced on the Ballantrae Banks in 1878; but seines are mentioned in the records as having been employed in the winter fishing in January, 1871, though not apparently on the Banks, where, indeed, the abundance of set-nets or so-called trammels prevented their use for several years. It is to be noted further that by a byelaw (No. 18) that came into force in 1902, seine-trawling for herrings was prohibited from the 15th January to 31st March in each year within an area embracing Ballantrae Banks and the waters south to Corsewall Point.‡

The table showing the takes of herrings landed in the four months of each season, December–March, is appended.

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* By the Act 23 and 24 Vict., c. 92.

† 28 and 29 Vict., c. 22.

‡ The area is thus defined:—"A straight line drawn from Bennan Head, Ayrshire, to a point three miles north-west (magnetic); a straight line drawn from Corsewall Point Lighthouse to a point three miles north-north-west (magnetic); and a straight line joining the above-mentioned points."—*Twentieth Annual Report*, Part I., p. 258.

[TABLE.

Years.	December.	January.	February.	March.	Total.	Notes.
1863–64	...	...	...	...	...	
64–65	6	...	...	...	6	
65–66	1,695	1	...	...	1,696	
66–67	7	66	4	...	77	
67–68	...	70	?	?	386	11th January to 1st July.
68–69	13	...	...	...	13	
69–70	...	(14)	?	?	1,649	1st February to 1st June.
1870–71	(101)	(35)	?	?	1,621	,, ,, ,, 13th May.
71–72	10	?	?	?	1,725	Winter and Spring to 1st June.
72–73	...	?	?	?	2,025	,, ,, ,,
73–74	...	?	?	?	4,890	,, ,, 30th May.
74–75	...	?	?	?	9,197	,, ,, 22nd ,,
75–76	...	?	?	?	6,071	,, ,, 13th ,,
76–77	...	?	?	?	10,254	,, ,, 12th ,,
77–78	...	5,075	10,958	1,779	17,820	Including 23 crans in April.
78–79	...	7,930	6,276	4,974	19,594	,, 414 ,, ,,
79–80	4,085	5,200	6,518	19,452	35,277	
1880–81	970	2,872	9,310	11,922	25,074	
81–82	178	1,183	6,188	1,337	8,886	
82–83	116	3,697	1,766	17,566	23,145	
83–84	143	2,813	8,465	3,280	14,707	Including 6 crans in April.
84–85	416	744	5,755	14,094	21,009	
85–86	227	184	2,224	2,352	4,987	
86–87	37	48	754	9,074	9,913	
87–88	70	450	2,127	6,938	9,585	
88–89	913	875	8,981	759	11,528	
89–90	1,070	296	6,920	978	9,264	
1890–91	8,736	1,854	5,047	...	15,637	
91–92	2,946	...	1,577	1,736	6,259	
92–93	65	...	454	...	519	
93–94	...	...	3	72	75	
94–95	...	...	117	1,164	1,281	
95–96	...	...	194	150	344	
96–97	...	...	46	423	469	
97–98	...	?	?	?	30	"Winter fishing.'
98–99	...	?	?	?	1,247	,, ,,
99–1900	190	...	449	3,664	4,113	
1900–01	8	...	5,652	3,743	9,395	
01–02	...	2,450	3,072	1,316	6,838	
02–03	...	530	177	25	732	
03–04	...	92	461	322	875	
04–05	?	...	...	...	?	{ 108 crans, 1st Oct. to 31st Dec.
05–06	?	584	183	389	?*	{ 106 crans, 1st Jan. to 27th May.
06–07	10,195	337	542	555	11,629	*and 2,881 crs. 1st Oct.–31st Dec.

With the other table it enables us to see that there was no great winter fishing from 1855 to 1874, and that until 1870 the winter fishing was chiefly in December. From evidence given in 1864 before the Royal Commission it appears that the spring fishing for spawning herrings on the banks came to an end in 1856, and that it was declining for some years before that time; and that the herrings did not return until 1862, when the close-time was in force.* In the late autumn of 1865, as appears from the notes of the Fishery Officers, herrings came back in abundance to the Ayrshire coast. None were taken in October of that year, but on 3rd November the fishermen at Ayr

* *Ibid.*, p. 1189.

struck a dense shoal, and during that month and December heavy catches by drift-nets were landed from Ayr Bay and neighbourhood, chiefly from shallow water, three and four fathoms. The total taken in these two months was 3410 crans. In the following January only a single cran appears to have been caught, but in November, 1866, the herrings returned to the coast, where good catches were obtained, principally in Irvine Bay, but it did not last long. In January, 1867, herrings were got inshore at Dunure, south of Ayr Bay, and in the early part of November they set in, as they had done in the two preceding years, on the northern part of the coast, in Irvine Bay, but they did not stay long and comparatively few were taken. In 1868 they did not appear there, but in November some were caught in Loch Ryan, at the southern extremity of the coast.

In January, 1869, several boats tried along the coast between Dunure and Girvan, but got nothing, and the Officer noted that from the number of gannets upon the spawning banks at Ballantrae on 22nd and 23rd January, and the quantity of herrings found in the stomachs of cod and other fish landed (the two usual signs), the fishermen were in hopes of a good fishing; but there is no further entry, and apparently no fishing took place. The summer fishing this year was very successful on the Ayrshire coast, the best for twelve years; in September and October a few were caught in Loch Ryan. In the spring fishing of 1870 and up to 1st June, 1649 crans of herrings were taken, but there are no particulars furnished as to the localities or the months. The summer fishing was again successful on the Ayrshire coast, falling off towards the end of July, and in August and till November takes were got in Loch Ryan. In the next year the winter and spring fishing yielded 1621 crans up to 13th May, but no particulars are furnished; the summer fishing was unsuccessful. Seines are mentioned as having been used in January. It is also mentioned at the beginning of September that immense shoals of herrings had been seen at the mouth of the Clyde and near Ailsa Craig by passing vessels. In 1872 the catch up to 1st June was 1725 crans, and the summer fishing was very poor. Herrings were again taken in Loch Ryan in November. In 1873 the catch up to 1st June was 2,025 crans; the summer fishing was apparently on the Ayrshire coast and successful till August; and in September and October there was a slight fishing off Ayr, and off Irvine in November. In 1874 the winter and spring catch, up to 30th May, was 4890 crans; the summer fishing was on the Ayrshire coast and then at the south end of Arran, and the last herrings were taken at the beginning of September. In 1875 the winter and spring catch increased to 9197 crans, but no particulars are given; the summer fishing on the coast was extremely unproductive, such as were landed coming mostly from the other side of the Firth. In 1876 the quantity taken up to 13th May was 6071 crans, and the summer fishing was poor. Next year the winter and spring fishing yielded 10,254 crans (up to 12th May); the summer fishing was not successful, and the last herrings were landed in August.

In 1878 particulars are for the first time given of the winter and spring fishing, which, as we have seen, had been increasing in the previous four or five years. The total catch amounted to 17,820 crans. On 5th January it is reported that herrings were abundant all along the Ayrshire coast, drift-nets, set-nets, and seines being used. On 19th January a large shoal was said to be off Ballantrae; in the week ended 2nd February, 3820 crans were landed, the best fishing being off Woodlands, near Girvan; in the next week the quantity landed was 4462 crans, mostly taken off Turnberry Point and Girvan by seines. On 16th

February it was stated that as there was a favourable appearance of herrings on the spawning banks the fishing for the rest of the season would be almost entirely by set or trammel-nets; and on 23rd February it was noted that the herrings had now settled on the banks for spawning. In the week ended 2nd March, 4600 crans were landed, all taken by trammels. The weather then got very stormy, and only 22 crans were landed in the following week, which had been picked off the trammel nets, the rest of the fish being unfit for food, the nets not being hauled for some days. In the middle of March the gannets began to get scarce, a bad sign, and the fishing declined and ended in the last week of March, though 23 crans were taken at the beginning of April at Lendalfoot, near Bennan Head. The quantities landed, and the number of boats fishing in the various weeks, were as follows:—

January.		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
31	95	165	4,462	182	22
48	230	154	206	182	1,261
83	751	191	1,690	178	474
73	174	182	4,600	35	22
151	3,820				
	5,070		10,958		1,779

It is to be noted that as a general rule the fishing consists of two parts; the first is carried on in the neighbourhood of the spawning banks, on the shoals as they are collecting, and the second from a little after the middle of February, among the spawning herrings on the banks. The summer fishing this year was of little importance, the last herrings being taken in the beginning of August; in November and December a few were got on the Arran and Argyllshire coasts.

In 1879, when the total for the winter and spring fishing amounted to 19,594 crans, the fishing began to the south of the spawning grounds, that is, in the opposite direction to the locality where it opened in the previous year. The herrings in January were caught off Loch Ryan and Corsewall Point by seines and drift-nets. By the beginning of February they were taken along the coast from Corsewall to Ayr, a stretch of 35 miles, and mostly between three and five miles from shore. In the first week of February the heaviest takes were got near the spawning banks off Ballantrae; drift-nets, seines, and trammels were used this month, and some catches were made off Loch Ryan. In March trammels alone were used on the banks; in the week ended 15th many of the fish were spent, and the best catches were obtained off Bennan Head, to the north of the banks. In this locality and at Lendalfoot, still further north, 414 crans of herrings, mostly spent, were got by trammels early in April, the fishing closing on the 9th of that month. It was thus late in closing, and it may be noted that no herrings were secured in the previous December, the shoals being late in arriving. The weekly quantities and the number of boats engaged were as follows:—

January.		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
56	90	304	104	204	1,220
188	1,334	125	410	210	921
290	3,078	251	1,755	199	1,783
304	3,428	251	4,007	98	1,050
	7,930		6,276		4,974

The summer fishing on the coast was poor, most of the boats fishing at Arran and on the Argyllshire coast. About 18th or 19th October a large shoal of herrings entered Loch Ryan, but went out in a day or two before many were caught; very few herrings were taken in November, but an unexpectedly early commencement of the winter fishing was made off Loch Ryan on 11th December, and during that month 4085 crans were secured there about two to five miles from the coast. In January, 1880, the fishing continued in that quarter, extending towards the end of the month from Corsewall to Ballantrae. In the week ended 21st February the herrings were settling on the spawning banks; at the beginning of March the best takes were got on the banks by seines, after which the trammels were too crowded for them, and the seiners left. The fishing went on to the end of March, and the enormous quantity of 35,277 crans (about 123,570 cwts, or more than 35,000,000 herrings) were secured, which, at the prices then ruling, were worth considerably over £70,000. The weekly returns are these :—

December.		January.		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
..	..	..	..	307	2,928	127	829
46	288	290	499	210	512	253	4,806
186	2,722	310	2,053	185	558	267	4,231
202	1,075	364	2,624	302	2,520	?	9,586
..	..	19	24	..	..	..	..
	4,085		5,200		6,518		19,452

The summer fishing, up to the end of July, was successful on the Ayrshire coast this year, especially off Girvan, but the herrings disappeared in August; in October some were taken in the middle of the Clyde, and at the end of the month at Loch Ryan; in November, and still more in December the takes in that neighbourhood increased, and it is noted in December, that the chief grounds extended to twenty miles off Corsewall Point. In January, 1881, the best areas continued to be off Corsewall Point and Loch Ryan, as in the previous year, and even to the south of Corsewall. In February the precise positions where the herrings were taken are not specified, but "the usual grounds" are referred to, and by far the largest quantity this month were taken by seines; in one week the record of 5540 crans was reached. On 12th March it is said the herrings were "on the eve of spawning" and were inferior; on 19th March they were largely spent fish, and the fishing closed at the end of the month. The weekly particulars are as follows :—

December.		January.		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
171	910	290	2,125	335	793	256	452
?	40	158	62	255	237	158	1,562
130	20	407	120	297	2,740	180	1,489
..	..	345	565	315	5,540	?	8,419
	970		2,872		9,310		11,922

The aggregate thus amounted to 25,074 crans. The summer fishing on the coast was very poor, most of the boats going to Arran and Kilbrennan Sound. At the beginning of November herrings were taken in Loch Ryan, but heavy storms came on and put an end to the fishing; some were also got there in December, and at the end of the month off Ballantrae. In January, 1882, and again in February the fishing was much interrupted by the storms, but this does not account for the comparatively small catches; for example, 108 boats fishing in Loch Ryan for a night at the beginning of January got only a few hundreds of herrings amongst them, and three weeks later 236 boats fishing for four nights took altogether only 383 crans. The bulk of the herrings up to the week ended 11th February were landed at Stranraer, and presumably taken in or near Loch Ryan or Corsewall Point. On 11th March a gale from the west came on and, it is said, dispersed the herrings, and the fishing came to a stop. It is clear, however, that the shoals this year were very much smaller. The quantity taken each month was as follows, the total being 8,886 crans :—

December.	January.	February.	March.
178	1,183	6,188	1,337

The summer fishing was carried on during May and June mostly on the Ayrshire coast, especially near Girvan, and towards the end of June and afterwards, on the other side of the Firth, in Loch Fyne and Kilbrennan Sound. The winter fishing commenced on 8th December, near Girvan, and continued there and also at Stranraer, but the aggregate for the month was small. In January, 1883, the herrings were got both in the south and the north, particularly at Lendal Bay, a few miles north of the spawning banks, in 9-15 fathoms. In February there were several gales which interrupted the fishing, but in the week ended 3rd March the extraordinary quantity of 16,060 crans was landed; the catch of one pair of trawlers filled eight "skiffs" or fishing boats, and another boat sank with the weight of herrings. The fishing on the banks was by seines as well as trammels, but trammels alone were used towards the end of the fishing. The catches gradually declined, and none were taken after 24th March. The aggregate for the season was 23,145 crans, the details being as follows:—

December.		January.		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
..	..	98	585	262	87	320	16,060
2	2	182	796	132	327	130	774
21	15	330	2,196	10	19	48	339
70	32	246	120	408	1,333	57	393
93	67	..	..	..	..	..	..
	116		3,697		1,766		17,566

The summer fishing on the coast was not important. The winter fishing commenced on 6th December, the place of fishing being off the harbour of Girvan, but little was got during the month. In January herrings were found at Saltcoats and also apparently about Loch Ryan; at the middle of the month they were chiefly landed at Stranraer, but good takes were also got between Ayr and Maidens. The greatest quantity was taken in February, and it is mentioned that in March one seine boat secured 408 crans in four hauls of the net one week, which sold for £599. The fishing closed later than usual, on 2nd April, and the fishing-ground at the end of March was Ardmillan Bank, three miles south of Girvan. The total catch amounted to 14,707 crans, apportioned as follows:—

December.	January.	February.	March.	April.
143	2,813	8,465	3,280	6

Perhaps to the total should be added 238 crans taken on Ballantrae Bank by trammel nets in the week ended 15th April. The summer fishing was more successful than usual on the Ayrshire coast, and herrings were got north of Girvan in August, but after that most of the fish landed came from other quarters, as Kilbrennan Sound. In December some herrings were caught off the mouth of Loch Ryan as well as within it, and others at the Cumbraes, the latter greatly predominating in the last week of the year. And in January, 1885, most of the herrings at first taken were got in the same quarter; later they were secured between Girvan and Turnberry Point, to the northwards, but the quantity in January was inconsiderable. In the middle of February most of the catch was taken on the north bank off Ballantrae by seines, and in March on the bank by the same method of fishing, the catch in the week ended 14th March amounting to 12,033 crans. After this the fishing declined, and on the 24th the trammels were clean and the fishing stopped. The quantities in the various weeks, the total amounting to 21,009 crans, were these:—

December.		January,		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
..	..	6	99	189	382	271	1,666
16	87	..	..	395	712	289	12,033
..	..	94	34	325	4,102	160	360
66	128	128	530	120	559	35	35
..	..	84	81	..	..	..	..
	416		744		5,755		14,094

The fishing in summer on the Ayrshire coast lasted only till early in July, most of the boats going to Kilbrennan Sound. No herrings were landed between 12th September and the week ending 26th December, when 227 crans were taken by 38 boats at Girvan and Maidens. In January, 1886, the weather was very stormy, and the first herrings were landed on the 9th, but only a few crans; the next were taken in the week ended 23rd by drift-nets on Ballantrae Bank, and more were taken there in the following week. In February the fishing was slack, owing partly, it is said, to the low prices current; but that the herrings were scarce this season was shown in the week ended 27th February, when the weather was fine, and 285 boats were nightly at sea, while the catch totalled only 1121 crans. The fishing closed on 24th March, and was the poorest, it is remarked, since it commenced "about twelve years ago." The aggregate amounted to 4987 crans, apportioned as follows:—

December.	January.	February.	March.
227	184	2,224	2,352

The summer fishing on the coast was unimportant. In December some herrings were taken at Loch Ryan, but the fishing fell off, and trials on the Ayrshire coast towards the end of the month were without result. In January, 1887, small takes were got off Girvan and in the neighbourhood, but there was no "appearance" of herrings on the coast. About the middle of February the herrings were caught between Bennan Head and Ballantrae Bank, and in the week ended 26th on the bank itself. Little was caught until the week ended 5th March, during which the weather was calm and summer-like, when 5084 crans were landed, and in the next week 3707 crans. The officer notes that there was a great admixture of small and unmarketable herrings amongst those taken, especially by the seine-net, and quantities were used as manure. The season closed on 15th March, the aggregate being 9913 crans, apportioned as follows:—

December.	January.	February.	March.
37	48	754	9,074

In November and December most of the herrings landed were taken in Loch Ryan by trammel-nets.

In January, 1888, a large body of herrings came close inshore between Girvan and Turnberry, but they did not stay long. In February most were taken by seine on Ballantrae Banks, and they were very largely small and immature. But in the week ended 3rd March, 6786 crans of large and excellent herrings were caught on the banks, of which 6024 crans were got by seines and 762 by set-nets. After this little was done, a gale closing the fishing on 8th March. The aggregate was 9585 crans, as follows: —

December.	January.	February.	March.
70	450	2,127	6,938

There was comparatively little fishing on the coast in summer, but many herrings were taken in Luce Bay. The winter fishing began on 10th December between Dunure Head and Ayr Bay, where it continued throughout the month, principally with drift-nets.

In January, 1889, the fishing-place was chiefly between Girvan and Turnberry Point, up to near the middle of the month, and then from three to six miles south of Girvan and close to the shore. The first part of February was stormy, and little was caught; towards the end of the month the herrings were taken on Ballantrae Banks both with seines and trammels, and they were of a good size. In March the fishing fell off, and gradually came to a close on 15th March. The quantity for the season was 11,528 crans, apportioned as follows:—

December.	January.	February.	March.
913	875	8,981	759

At the end of November the winter fishing commenced off Culzean Castle, north of Turnberry Point; in December it continued in the same neighbourhood between Maidens and Dunure. In January, 1890, it was in the same region, north of Turnberry, till the close of the month, when the herrings were taken chiefly between Girvan and Turnberry Point. In the first week of February the principal ground was Ballantrae Banks, where it continued; on the 22nd, large numbers of haddocks were caught on the bank by the seine-nets, and were found to be gorged with herring spawn. The fishing closed very early, on 4th March, the shoals having come earlier and left sooner. The aggregate catch was 9264 crans, the weekly particulars being as follows:—

December.		January.		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
46	442	16	17	88	419	174	978
62	586	41	258	93	1,931	..	..
58	18	5	..	107	559	..	..
30	24	12	3	163	4,011	..	..
..	..	55	18	..	..	..	..
	1,070		296		6,920		978

Perhaps the catches in November should be added, which would bring the total up to 9861 crans. On 18th November a trial was made by eight boats off the Ayrshire coast, but no herrings were caught. On 27th and following days good catches were secured off Ayr Heads, in the south part of Ayr Bay, and so close inshore that a good many of the drift-nets were torn on the rocks. The fishing here continued throughout December with great success; in the week ended 20th, 5288 crans were taken, almost entirely by seine-net, off Ayr Harbour, within a few hundred yards of the shore, and in from two to seven fathoms of water. Towards the end of December the fishing in that locality came to a sudden termination, but it was renewed in January 1891 off the Heads of Ayr; in the week ended 10th the fishing was between Ayr and Dunure Head, but the shoal began to move south, and in the next week the totals fell to 32 crans. After this the weather was stormy for a time. The fishing in February was on Ballantrae Banks; in the first week, though the weather was fine, only 96 crans were taken, and in the second week only 20 crans; in the week ended 21st February 4875 crans were landed, mostly by seines, and there was a large proportion of small fish among them, and then the fishing came to an abrupt end, no herrings being got in March. The weekly particulars are these:—

December.		January.		February.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
47	637	75	247	92	96
139	2,276	144	1,545	124	23
184	5,288	48	32	224	4,875
132	535	..	..	225	53
..	..	66	30	..	..
	8,736		1,854		5,047

The total was thus 15,637 crans, of which more than half were taken in December. If the catch in the last week of November be added, the total is raised to 16,111 crans.

At the end of the year the herrings returned to Ayr Bay, but they were also taken in Loch Ryan, as they had been to some extent in October. Most were got off Ayr, and the fishing in Loch Ryan closed in the first week of December. During December the fishing was off Ayr Heads and neighbourhood. In January, 1892, the first week was stormy, and it was found that the herrings had left the ground; none were taken that month, and there was no "appearance" of herrings. It was not till the second week in February that they were again found on Ballantrae Banks, and the fishing went on there till the end of the month, without great success, and there were large numbers of small unsaleable herrings in the catches. In the first week of March the weather was fine, and 65 boats landed 1572 crans, of which 1059 crans were caught by trammels, and the rest by seines. The fishing closed on 8th March, the total for the season being 6259 crans. If the November catch be added, the aggregate will be increased to 7222 crans. The monthly quantities were these:—

December.	January.	February.	March.
2,946	—	1,577	1,736

In May and June herrings were got in fair quantities on the Ayrshire coast, especially between Girvan and the Heads of Ayr. At the end of December, from the 27th to the 29th, herrings were again got on the grounds off the Heads of Ayr, but not in large quantity, and the shoal then disappeared. In January, 1893, no herrings were landed, trials on the usual grounds being almost or quite blank, and there being no "appearance" of shoals; cod were also scarce. The first herrings of the season were landed on 16th February, and were taken on Ballantrae Banks; but the catches were small, and the fishing closed at the end of February, the trammels being "clean." The total for the season was only 519 crans, landed as follows:—

December.	January.	February.	March.
65	—	454	—

The summer fishing was small, and no herrings were landed after August, the shoals having failed to appear at the end of the year. In January, 1894, there was no "appearance" of herrings on the coast, and no herring fishing. The first herrings of the season were landed on 16th February, when three crans were caught at Bennan Head, and this was the total for the month, the trammels set on the banks being practically "clean," only a few hundreds of herrings being caught. There was no "appearance" on the banks during the season. In the week ended 9th March the trammels caught nine herrings; but on the 16th and 17th 72 crans were taken, and this represented the fishing for the season, none being got afterwards. The aggregate was thus only 75 crans.

December.	January.	February.	March.
—	—	3	72

There was a tolerably fair fishing up to August on the Ayrshire coast, especially about Girvan and the Heads of Ayr; but no herrings were taken in the closing months of the year.

There was no herring fishing in January, 1895, the first herrings being landed in the week ended 16th February, and they were caught on the coast of Arran, about Whiting Bay, it being believed that a shoal was moving south towards Ballantrae. In the week ended 23rd February 116 crans of mixed sizes were taken on the banks by seines; but the fishing then was a complete blank till the week ended 9th March, when 169 crans were landed. After this, a few hundreds of crans were taken by trammel-nets, but on the 22nd the nets were "clean," and the fishing ended. The total for the season amounted to 1281 crans, thus apportioned:—

December.	January.	February.	March.
—	—	117	1,164

In this year no herrings were landed after 17th August.

In 1896 no herrings were caught in January, the first landed being on 15th February, and they were caught at the south end of Arran. In the week ending 22nd February, 194 crans were caught off Lendal Bay, half-way between Girvan and the Ballantrae Banks; they were taken mostly by seines, and were very small herrings, from eight to ten inches in length, bringing only a few shillings a cran. At the beginning of March the banks were again tried, but no herrings were taken. On 14th March 150 crans were got on the banks, spent and ripe, but so small that the greater part were unsaleable, and were thrown back into the sea. The fishing closed on 14th March, the total for the season being 344 crans, of which 194 were taken in February and 150 in March. No herrings were got in November or December.

In 1897 the first herrings were taken on the Ballantrae Banks in the week ended 20th February, those caught by seines being small and unmarketable. No herrings were taken in the closing months of the year.

In 1898 the winter and spring fishing was again a failure, only 30 crans being landed, but the officer gives no information as to the place of fishing, or when they were taken. No herrings were landed after September.

In 1899 the winter fishing was better, the total being 1247 crans, but no particulars are given. There was a summer fishing of small importance on the Ayrshire coast, and in November and part of December herrings were got in Loch Ryan and neighbourhood.

In 1900 the first herrings were landed in the week ended 17th February, and they were taken rather to the south of Ballantrae Banks. During the rest of the month and in March herrings were taken of very fair quality, both by trammels and seines; in the week ended 10th, 2912 crans were secured on the banks, of which 1746 were taken by the seiners and 1166 by trammel-nets. None were taken after this, and the total for the season amounted to 4113 crans, thus apportioned:—

December.	January.	February.	March.
190	—	449	3,664

In December a few herrings were again taken in Loch Ryan, but only a few crans.

In 1901 no herrings were landed till the week ended 9th February. The banks had been visited, but there was no "appearance" of herrings; on the 8th, 100 crans were secured near Turnberry. In the week ended 16th, 1641 crans were got by seines on the outer edge of the Ballantrae Banks, and the fishing continued on the banks till the week ended 23rd March. The total for the season amounted to 9395 crans, as follows:—

December.		January.		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
..	..	..	..	32	100	49	159
..	..	..	..	70	1,641	66	3,205
..	..	..	..	116	2,107	31	379
?	..	..	..	118	1,804	..	..
	8		..		5,652		3,743

No herrings were taken in December.

In 1902 the fishing commenced on 10th January, when 14 crans were taken at Dunure and Maidens Bay, and during the rest of the month there was a good fishing between Dunure and Turnberry, the total for the month being 3072 crans, and the herrings were caught close in to the shore. In the first part of February the fishing was pursued in the same quarter, and south as far as Girvan, but drifters also caught considerable quantities between Ballantrae and Corsewall Point. In the week ended 22nd February, most of the herrings were got about Bennan Head and the northern end of the protected area, and this was also the case in the following week. The fishing came to an abrupt end on 8th March. The total for the season was 6838 crans, as follows:—

December.	January.	February.	March.
—	2,450	3,072	1,316

It is to be noted that this was the first season in which the bye-law closing the banks to seiners came into force, and this, no doubt, reduced the quantity landed; but it appears several of the seine boats made hauls within the area. No herrings were landed in the district after September.

In 1903 the herrings were caught in Ayr Bay and to Turnberry Point, close inshore, from January 10th to the end of the month and well into February, but a fair fishing was also secured by trammels in Loch Ryan from the end of January to the middle of February. On 21st February it was reported that there was a good "appearance" of herrings in the vicinity of the spawning banks, but the weather came on stormy, and very little was secured, the herrings leaving on 14th March. The total for the season was 732 crans, thus apportioned:—

December.	January.	February.	March.
—	530	177	25

No herrings were landed in November and December, according to the weekly returns, but at the end of the year 51 crans are added as having been landed between 3rd October and 26th December.

In 1904 the fishing began in the week ended 16th January, and small quantities of herrings were taken inshore at Dunure and Maidens. Towards the end of the month and in February fair takes were got in Loch Ryan; on 6th February a good "appearance" was reported on the banks, but little was taken, the total for the season being 875 crans, as follows:—

December.	January.	February.	March.
—	92	461	322

It also appears from a note that 108 crans were landed between 1st October and 31st December this year, but no particulars are given.

In 1905 there are unfortunately no particulars given as to the course of the fishing. It is only stated at the beginning of the summer fishing that 106 crans had been landed from 1st January to 27th May. There appears also to have been a good fishing towards the end of the year, because a note states that 2881 crans were landed between 1st October and 31st December, but there is no information as to the months otherwise, nor as to the localities where the fishing was carried on. The total for the whole year, including the summer fishing, was 4479 crans.

The fact mentioned, that there was a good fishing towards the close of the year, probably indicated that the shoals were returning again to their old grounds, because the spring fishing in 1906 was better. In January a total of 584 crans were landed, but nothing is said as to the quantities each week, or as to the place of fishing. In the first part of February the fishing was apparently mostly about Loch Ryan; towards the end of the month, and in March, about the Ballantrae Banks. The fishing closed in the week ended 24th March, the total for the three months being as follows:—

January.	February.	March.
584	183	389

For the reason stated, the absence of information as to December, the total for the season cannot be given.

At the end of 1906 a very good fishing was obtained. In the early part of November good takes were secured near Ayr, and later in the month between Girvan and Turnberry, off Girvan, and in Loch Ryan. In December the fishing continued with extraordinary good results in Loch Ryan, but also between Ayr and Dunure, and at the middle of the month a good "appearance" along the whole coast was reported. In January the fishing fell off very much, and the herrings left Loch Ryan. The first part of February was stormy and few herrings were caught, the boats only fishing on two weeks in the month. March was also very stormy, and comparatively small catches were got on the spawning banks, the fishing closing in the last week of the month. The aggregate for the four months, December-March, amounted to 11,629 crans, by far the greater portion being got in December. If the catches in November are added the total would be 14,193 crans; but it is stated that most of the 69 crans landed in the first week of November were caught in other districts. It is to be noted in considering the monthly totals that seiners were excluded from the banks and within the area specified in the bye-law (*see* p. 48) from 15th January to the end of March; and in former years seiners landed the bulk of the herrings. The weekly particulars are these:—

November.		December.		January.		February.		March.	
Boats.	Crans.	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
21	69	68	1,768	30	186	9	7	15	58
29	454	125	1,499	61	133	...	...	24	391
42	266	124	4,911	38	13	...	...	2	...
40	612	70	2,017	16	5	43	535	4	106
52	1,163	...	...	...	...	...	...	...	...
	2,564		10,195		337		542		555

From the above account it is evident that the fluctuations in the winter and spring fishing on the Ayrshire coast have been very marked over the period embraced in the records. Taking the mean for the whole period of all the herrings landed in the district, the yield in the years 1863–1874 was below the average; it was also below the average in the years 1892–1905, with the slight exception of 1901. It was above the average in the period 1877–1891, with the slight exception of 1886, and it was again above the average in 1906–1907. By far the greater quantity of herrings is taken in the winter and spring fishing, and the curve for the whole year represents the yield of this fishing and its fluctuations very well. Judging from the curve (Plate III.), it is not improbable that the fishing during the next few years will be successful.

From the particulars as to the place of fishing, it would appear that in some years the predominant shoals approach the spawning grounds from the northwards, and in other years from the south; in still other years apparently from both directions, but full particulars are sometimes lacking. Thus, in the period 1865–1867 the shoals came from the north, as they did also in 1878, 1883, 1885, and in the period 1887–1891, and again in 1902 and 1903. They approached from the south in 1879–1882, apparently in 1904, and again last year. No doubt the banks off the coast are the spawning grounds for shoals of herrings that come from various quarters, and it may be from the Irish coast, which is only some 25 miles distant, and therefore much nearer than Loch Fyne. But in all probability the bulk of the herrings come usually from the Firth of Clyde.

Campbeltown District.

This district was formed in 1863, having previously been included in the district of Inveraray. It extends from Skipness Point down the eastern side of the peninsula of Kintyre, round the Mull, and along the western coast of the peninsula to Tayinloan, opposite the island of Gigha. It includes that island and also the islands of Islay, Jura, and Colonsay, in the first named of which an important herring fishery is carried on in some years. The statistics dealt with here are, however, practically confined to the herrings caught within the Mull of Kintyre—that is to say, within the Firth of Clyde. In 1906 there were in the district 358 fishing boats and 752 resident fishermen and boys, of which 159 boats and 475 fishermen belonged to the part of the coast from Skipness Point to Sanda Island, most of them being at the town of Campbeltown.

In the period 1863-1906, the gross quantity of herrings taken, and all practically in the Firth of Clyde, was 910,718 crans, or about 3,187,500 cwts., the general annual average being 20,698 crans. In the first twenty-two years, 1863-1884, the gross quantity landed was 317,939 crans, giving a general annual average of 14,452 crans. In the last twenty-two years, 1885-1906, the aggregate quantity landed was 592,779 crans, the general annual average being 26,944 crans. In this district, therefore, the quantity of herrings taken very considerably increased in the second half of the period.

Grouping the returns in ten-yearly periods, the mean catch per annum in each period was as follows:—

1857–66 ..	2,346 crans.	1887–96 ..	26,158 crans.
1867–76 ..	8,185 ,,	1897–1906 ..	26,503 ,,
1877–86 ..	29,286 ,,		

The first period embraces only four years, 1863-1866. When the returns are arranged in five-yearly periods, the resultant annual average in each period is as follows:—

1862–66 ..	2,346 crans.	1887–91 ..	34,852 crans.
1867–71 ..	4,958 ,,	1892–96 ..	17,465 ,,
1872–76 ..	11,413 ,,	1897–1901 ..	30,365 ,,
1877–81 ..	22,612 ,,	1902–06 ..	22,642 ,,
1882–86 ..	35,961 ,,		

The most productive period was thus 1882 to 1891, but an examination of the table showing the annual yield (p. 118), or the diagram of the same, shows that there were two great periods of abundance, viz., from 1879 to 1891, and from 1899 to 1903. The extent of the fluctuations in the annual yield was from 1732 crans in 1868 to 43,609 crans in 1882 and 43,535 crans in 1887. The catch in 1906 (11,070 crans) was the lowest since 1878.

The great area of fishing in the Campbeltown district is the Sound of Kilbrennan, an arm of the sea extending between the island of Arran and the peninsula of Kintyre, in a north and south direction, and having deep water—at some places over 80 fathoms. At the north end it opens into the area called the Inchmarnock waters, between Bute, Arran, and the mouth of Loch Fyne. It is up this stretch of water that the shoals of herrings often pass to the higher reaches, as Loch Fyne; but it would be wrong to consider the Sound merely as a passage-way to the northern waters, because dense shoals of herrings may be found in it throughout most of the year.

In the early years for which statistics exist the fishing in the district was comparatively poor. Thus for the years 1863-1868 the annual average was only 2192 crans, the highest yield being 2851 crans, in 1864. Particulars as to the place of fishing in those years are scanty, but it appears that the fishing was carried on chiefly in the neighbourhood of Campbeltown, and almost exclusively there in the early part of each season, the grounds extending to the south end of Arran. As the season advanced herrings were also taken up the Sound in the vicinity of Carradale, but by no means the bulk of the catch, and it is evident that in none of the years did a large body of herrings make its way up Kilbrennan Sound, or at least form the object of fishing there. Seining began in 1867, but it was not effective.

In 1869 and 1870 the catch was considerably greater, but it fell a little in 1871. The average for the three years was 7006 crans. In June, 1869, contrary to what occurred in the preceding years, most of the herrings were got near Carradale, or landed there, and there was said to be a good fishing all the way from Campbeltown to Skipness at the north end of the Sound. Thus in June, 1868, 214 crans were landed at Campbeltown and 139 crans at Carradale, while in June, 1869, there were 410 crans landed at Campbeltown and 695 at Carradale, about ten miles farther up the Sound. During the rest of the summer the shoals were chiefly about Carradale, and the drift-net was much more successful than the seine. The fishing closed on 9th October, the boats leaving for Greenock district. The total for the year was 7446 crans.

In 1870, the principal grounds were again about Carradale, and between it and the Arran coast. and drift-nets were chiefly used. At the end of September most of the boats were fishing at Loch Ranza, at the north end of Arran, the shoals having apparently "moved up towards Bute." During the rest of the year the fishing continued in this locality and also about Carradale. The fishing closed on 19th November, the total for the year being 8509 crans.

In 1871, by far the greater part of the herrings taken in June were caught in the vicinity of Campbeltown. On the 8th July, it is remarked that there was not much "appearance" of herrings near Campbeltown, but there was said to be a great body of herrings down at the Mull of Kintyre. During July, August, and September the best fishing was got about Carradale, and also in October, extending up to Skipness. The fishing closed on 21st October, the aggregate being 5063 crans.

The quantities taken in the various months of the two groups of years were as follows:—

	June.	July.	August.	Septemper.	October.	November.
1863–68 ..	2,770	6,486	3,406	489	1½	—
1869–71 ..	3,962	5,951	7,615	2,473	893	124

In the years 1872-1874 the catches were above the average, the mean for the three years being 15,574 crans, and they were singularly uniform as to the gross quantity in each year. In these years, it may be here noted, the takes in Loch Fyne were abnormally low.

In 1872, the catch in June was comparatively small, and about equal quantities were landed at Campbeltown and Carradale; in July the fishing greatly improved, most of the herrings being taken about Carradale; in August it was also good, the fishing now extending up the Sound of Kilbrennan to Skipness; in September the grounds were the same, herrings being also taken near Campbeltown; and the fishing closed in October, in the week ended 26th, with an aggregate of 15,432 crans.

In 1873, the fishing in June was light, mostly in the lower reaches of Kilbrennan Sound, near Campbeltown, and Carradale, but also to the south of the island of Sanda, near the Mull of Kintyre. In August the fishing was chiefly in the Sound of Kilbrennan up to Skipness Point; it was the same in September and October. On the 18th October it was noted that herrings were abundant all along the western coast of Arran down to Pladda and up the Sound, between Carradale and Skipness. The fishing fell off afterwards, and it closed on 25th October, the total for the year being 15,891 crans.

In 1874, the Officer reported on 18th June that there was a good "appearance" of herrings at the Mull of Kintyre and all over the channel of the Firth of Clyde. In June the fishing was mainly in the lower reaches of Kilbrennan Sound, especially about Carradale and Campbeltown; in July the chief grounds were between Campbeltown and Carradale, but also all along the Sound between Campbeltown and Skipness. In August and September it was the same; in October the herrings were mostly found south and west of Carradale and towards the Arran shore. The fishing was continued in November, herrings being caught south-east of Davaar island, at the entrance to Campbeltown harbour, and it was reported that there were still plenty of herrings in the channel south of Arran. The fishing closed on 14th November, the aggregate for the year being 15,400 crans. As mentioned below, however, it appears that 484 barrels or crans were landed in the spring fishing of this year, which were not included in the totals. The quantities taken in the various months in the three years were as follows.—

	June.	July.	Aug.	Sept.	Oct.	Nov.
1872 ..	286	4,245	4,381	4,225	2,295	—
1873 ..	711	6,286	4,106	3,502	1,286	—
1874 ..	1,258	5,263	3,719	3,076	1,467	617
	2,255	15,794	12,206	10,803	5,048	617

The four following years—1875-1878—were much under the average, the lowest being 1875, when the yield was only 3064 crans, and the best 1877, when the aggregate was 12,081 crans. The average for the four years was 7876 crans.

In 1875 the fishing in June was probably far down the Sound, in the neighbourhood of Campbeltown, since 255 crans were landed there as against 182 crans at Carradale, whereas in the previous year 682 were landed at Carradale as against 470 at Campbeltown. In July the best ground was in the vicinity of Skipness Point; in August and September the Sound of Kilbrennan is given; towards the end of September the weather became boisterous, and the fishing closed in the week ended 9th October.

In 1876, the grounds are not mentioned in the records for June, but more herrings were landed at Carradale than at Campbeltown; in July the fishing was apparently chiefly in Kilbrennan Sound; in August mostly the Arran side of the Sound was productive; in September fishing went on from Carradale to Skipness, and at Loch Ranza, in the north of Arran, and it closed on 7th October, when the aggregate was 7275 crans.

In 1877, the fishing grounds in June are not stated, and almost as large a quantity was landed at Campbeltown as at Carradale. In July the fishing was in Kilbrennan Sound, particularly about Carradale; in August and September it was all over the Sound, and the season ended on October 6th. The total was 12,081 crans, more than half of which was taken in August.

The fishing in June, 1878, was chiefly about Carradale and Machrie Bay, and also with drift-nets at the south end of Arran; in July and August it was in Kilbrennan Sound, from Campbeltown as far as Skipness, but early in September the fishing fell off, and it ended for the season in the week ended 14th September, with an aggregate of 9085 crans. In those four years the aggregate quantity landed in each of the months was as follows:—

June.	July.	August.	September.	October.
4,523	10,284	12,987	2,848	64

The year 1879 was high above the average, the total quantity of herrings landed being 33,980 crans. The first entry in the records is dated 31st May, and it states that "the total catch from 1st January to 25th May is 3200 crans, and during last week 276 crans, making a total for the season of 3476 crans. Only in April and May were any herrings got." The Officer also states that the spring herring fishery had been the best on record. He says he found nothing recorded for the spring fishery before 1871, and he gives the following as the number of barrels or crans taken in the spring fishery of the succeeding years:—

1871	..	20 crans.	1876	..	1,667 crans.
1872	..	—	1877	..	536 ,,
1873	..	—	1878	..	952 ,,
1874	..	484 ,,	1879	..	3,476 ,,
1875	..	430 ,,			

These quantities fall to be added to the totals above given for the years in question, from the weekly records of which they are absent.

It is not stated where the fishing grounds were in April and May, when the herrings referred to were caught, but in the last week of May they extended between Carradale and Skipness, an unusual circumstance at that period of the year, and none were got at Campbeltown. Probably, therefore, the herrings this year made their appearance at an earlier date. In June the fishing was all over the Sound of Kilbrennan, principally near Carradale and Skipness, also in Machrie Bay, and some drifters fished near Campbeltown. In July the fishing was also all over the Sound, there being a great "spread" of herrings, and drifters were more successful than seiners. The quality of the herrings, it was said, was better than for years. In August the quality of the herrings was "splendid," and no better fish were ever seen in the district. During this month and in September and October the fishing was still all over the Sound. On 1st November the Sound is described as still teeming with herrings, and boats came in great numbers from other districts. On 13th November it is reported that the fishing was between Campbeltown and Carradale, and that herrings were very abundant in the vicinity of Campbeltown. In the following week herrings were got in Campbeltown Loch and in Carradale Bay, and also between Arran and Kintyre. At the end of November the fishing fell off, but herrings continued to be caught near Campbeltown and Carradale till the second week in December, when the fishing closed. The quantities taken in each month, as far as recorded, were as follows:—

April and May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3,476	1,127	5,131	3,781	4,172	8,646	7,526	121

In 1880 the spring fishing up to 22nd May yielded 5090 crans. The Officer states that the first herrings were got on 24th February; very few were landed in March; April was better; and in May, especially about the middle of it, the fishing was unprecedentedly successful. Nothing is said as to where the herrings were captured. In June and July the herrings were taken in the Sound between Campbeltown and Skipness, drifters and seiners being equally successful. On August 7th the Sound was described as swarming with herrings; in September the fishing fell off, the grounds still being from Campbeltown to Skipness, and towards the end of the month chiefly near Carradale apparently. In October the grounds continued the same, but drifters were less successful, as the herrings lay deeper, and the buoy ropes had to be let down from 12 to 20 fathoms before any herrings were secured. In November the fishing was all over Kilbrennan Sound; at the beginning of December it was chiefly about Carradale and the vicinity of Isle Ross; in the second week, chiefly about Clonaig, Crossaig, and Skipness, in the upper reaches of the Sound; in the week ended 18th it was mainly about Carradale and Isle Ross, and in the next week between Campbeltown and the south end of Arran; while a good "appearance" was still reported in Kilbrennan Sound. The total for the year amounted to 37,520 crans, apportioned as follows:—

24 Feb.–29 May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
5,120	2,330	12,073	5,426	2,579	2,584	2,625	4,783

In 1881 the aggregate for the year fell to 20,393 crans. The quantity taken up to the end of May was 1280 crans; no particulars are given as to the months or the place of capture. In June most herrings were got in the lower part of the Sound, but the fishing went on also between Carradale and Skipness; 2345 crans were landed at Campbeltown and 886 at Carradale, while in June, 1880, 1232 crans were landed at Campbeltown and 1098 at Carradale. In July the grounds were chiefly on the west side of the Sound, towards Campbeltown and about Carradale; at the end of August principally about Skipness. The fishing fell off in September, and continued light till the end of October. In November the herrings were secured in the upper reaches of Kilbrennan Sound, more especially about Cour Bay and between that and Skipness. In December very good catches were got, and the fishing was mainly about Carradale. The quantities in the various months were :—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1,280	3,378	6,599	3,967	1,048	440	1,043	2,638

In 1882 the largest quantity recorded was landed, the total being 43,609 crans. No particulars are given as to the catch up to 31st May, except that the quantity was 2249 crans. In June the fishing was for the most part in the neighbourhood of Carradale and Campbeltown, the quantity landed at the former place, as far as specified, being 4586 crans, while 2298 crans were landed at Campbeltown. In July the grounds extended from Campbeltown up to and beyond Carradale, and towards the end of the month up to Skipness, where some of the seiners made heavy catches ; it is mentioned in the week ended 29th July that one seining crew earned £450 in three nights, and another £200 in one night. In August the fishing extended from Campbeltown to Skipness ; in September it was the same, but mostly from Carradale to Skipness ; on 21st October the upper parts of the Sound were described as swarming with herrings. The last herrings were landed in the week ended 28th October ; after this the weather was unsettled, and trials made were unsuccessful, and it was reported in November and again in December that the "appearance" of herrings had gone. The quantities in the various months were :—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
2,249	7,329	12,415	10,357	5,339	5,920	—	—

In 1883 the catch amounted to 36,465 crans, of which 1859 were were taken up to 31st May. In June the fishing extended from Campbeltown to Skipness, and it so continued in July, August, and September, in the latter month especially from Carradale up to Skipness Point. In October it was the same, and towards the end of the month and in the early part of November, mostly about Carradale ; then (10th November) mostly from Carradale to Campbeltown, and later about Campbeltown. At the beginning of December the fishing was farther seawards on the south-east side of the Sound, and it came to an end on 8th December ; trials made in the week ended 22nd December were unsuccessful. The particulars for the months are these :—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1,859	3,267	5,980	7,695	3,312	7,122	5,751	1,479

The quantity taken up to 31st May in 1884 was 1766 crans. In June the fishing was mostly in the vicinity of Campbeltown and Carradale, but also all over the Sound, and at Cour. In July it was mainly between Campbeltown and Carradale, but also up to Skipness ; in August it was all over the Sound, and at the end of the month especially from Cour to Saddell and in Machrie Bay ; in September from Skipness to Saddell ; in October it was the same, as well as off Arran, in the vicinity of Pirnmill, and towards the end of the month heavy catches were got near Carradale. In November the fishing was mainly off Carradale and also at Campbeltown, and the season ended on 29th November, the boats leaving for the Ayrshire coast, where there was a good fishing reported. The aggregate for the year was 33,572 crans, thus apportioned:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1,766	2,363	8,672	5,799	925	9,654	4,393	—

In 1885 the aggregate was 36,842 crans, of which 2363 crans were caught before 31st May, time and place unspecified. In June the fishing extended from Campbeltown to Skipness, the seiners, as usual, working mostly in the upper waters, which are narrow, and the drifters in the lower reaches and near Campbeltown. In July the fishing was chiefly between Skipness and Saddell, and on the Arran side in Machrie Bay and between Pirnmill and Brown Head, towards Pladda. In August, on the west side of the Sound, it was mainly between Skipness and Isle Ross, and on the Arran side at Blackwater and Machrie Bay; in September it was chiefly from Skipness to Saddell, but also to the south end of Arran; in October it was on both sides of the Sound, especially about Carradale and Machrie Bay, and the herrings were said to be of prime quality. Towards the end of the month the best catches were got in the lower reaches and at Carradale, and the fishing closed on 24th October. Trials made after that were unsuccessful. The quantities in the various months were:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
2,363	2,528	7,839	6,279	8,922	8,911	—	—

Up to 31st May, 1886, 4607 crans were landed. It is recorded that the "spread" of herrings was sometimes very great over Kilbrennan Sound, and that the chief fishing places were the entrance to Campbeltown Loch, near the Isle Ross, and Carradale, and "latterly" about Skipness. The fishing was chiefly in April. The fishing in June was about Carradale and Isle Ross and near Campbeltown; in July about Campbeltown, the lower reaches of the Sound, south of Arran, near Carradale, and Cour; in August all over the Sound on both sides; in September mostly in Carradale and Machrie Bay. In the earlier part of October herrings were taken in the upper parts of the Sound, near Crossaig and Cour, between Campbeltown and Arran, Machrie Bay, and also near Pladda; at the end of the month mostly about Carradale and Campbeltown and south of Arran; in November the fishing was near Carradale and in Machrie Bay, also off Davaar Island and on the south-west coast of Arran. In December it was mainly about Carradale and from Carradale to Saddell and Machrie Bay, and the season closed on 18th December. The total for the year was 29,318 crans, apportioned as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
4,607	2,075	2,684	4,319	2,684	2,045	3,114	7,790

In the closing week 5350 crans were landed, taken between Saddell and Isle Ross and in Machrie Bay, and the quality of the herrings was superior.

In 1887 the aggregate amounted to 43,535 crans, of which 6210 crans were taken before the end of May. In the Officer's published report* it is said that fishing took place in every month of the year, and that herrings were found in great abundance in Kilbrennan Sound in spring and summer. In June the fishing was not very successful; the grounds were in the mid-channel of the Clyde and from Sanda Island to Carradale, and it is noted that herrings were scarce in the Sound; later in the month they were got from Campbeltown to Carradale and at Cour Bay. In the early part of July they were caught near Sanda, in the channel of the Clyde, and in the Sound; about the middle of the month, chiefly in the Sound, from Campbeltown to Carradale, and near Cour and Skipness. In August the fishing was on both sides of the Sound, from Skipness to Carradale, and principally between Cour and Carradale; in September Carradale, Machrie Bay, and Cour were the chief localities, and at the end of the month between Carradale and Arran. In October the fishing was mostly near Carradale and in the lower reaches of the Sound, and at the end of the month near Brown Head, Arran, and southwards. In November it was also mainly in the lower reaches, at Machrie Bay, and then between Isle Ross and Carradale. In the early part of December it extended from Isle Ross to Crossaig and near Arran; then (week ended 10th) between Isle Ross and Davaar, and the lower reaches near Arran, and the fishing closed on the 24th December at Machrie Bay. The aggregate was thus apportioned :—

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* *Fifth Annual Report*, Part I., p. xlviii.

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
6,210	1,263	4,470½	3,330½	10,173	3,306	10,669	4,113

The quantity taken in 1888 up to the end of May was very large, viz., 10,884 crans. The Officer notes that the fishing was very successful in January and February, while from March to the end of May the catch was small. There is, however, some doubt as to whether the whole of the herrings were taken in the Clyde area, for the fishing at Islay had started in 1886, and was very successful in 1888, and it is possible that some of the herrings were taken there, but there is no information bearing on the point. In June the fishing was at Davaar and Sanda, and also at Campbeltown and Carradale, and it was not very successful. In July it was at first in Campbeltown Loch, the Clyde channel, and Kilbrennan Sound, and later all over the Sound and north of Carradale; in August the grounds were between Carradale and Saddell, and on the Arran coast; in September chiefly at Cour, Machrie Bay, and from Cour to Carradale; in October near Carradale and on the Arran coast, off Brown Head, and the lower reaches, and towards the end of the month at Isle Ross and Saddell; in November the fishing was in the lower reaches, and later near Skipness, Carradale, and Machrie Bay; in December it was near Campbeltown, Carradale, and on the south coast of Arran, and the season closed on the 29th December. The total for the year was 41,369 crans, apportioned as follows :—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
10,890	704	4,690	6,349	2,279¼	4,702¾	5,012	6,742

In 1888 an association, known as the Fishermen's Association, was formed by the fishermen of Inveraray, Campbeltown, and Rothesay districts, mainly with the object of sending their herrings by steamers chartered by themselves to the Glasgow market, but they also fixed a voluntary close-time to be binding on members from 15th March to 31st May. In 1889, accordingly, the 7534 crans taken before the 31st May were caught between 1st January and 15th March, and apparently all within the Clyde area. In June comparatively little was got in

Kilbrennan Sound, the fishing being mostly off Davaar and in the mid-channel of the Firth. In July it was mostly off Davaar and across to the Arran coast, also off Carradale; towards the end of the month and in August it was mainly off Carradale and between Carradale and Arran; in September it was off Carradale and at Pirnmill, Arran; in October near Carradale, near Pirnmill, and on the south coast of Arran; in November all over Kilbrennan Sound, and especially off Carradale and in Machrie Bay, and the same in December. The fishing closed on 28th December, the aggregate being 32,906 crans, apportioned as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
7,534	1,569	3,120½	2,620¾	2,392	5,572	8,162	1,936

In 1890 the quantity taken up to 31st May, and thus between 1st January and 15th March, amounted to 12,499 crans. The note of the Officer is:—"From 1st January to 15th March the herring fishing was prosecuted by most of the seine-net crews of the district, and were fairly successful and quality good." There is a little doubt as to whether or not herrings from Islay are included. In June the fishing was prosecuted off Davaar and Sanda and in the Sound, in the upper and lower reaches, and on the south coast of Arran. In July also in the Sound and the lower reaches, and most of the herrings were landed at Campbeltown. In August most of the herrings were taken about Carradale and Skipness but the fishing fell off; in September it was very poor, and most of the boats left the district, fishing mostly about Ardlamont Point. In October it revived, and considerable quantities were taken near Skipness and in the upper parts of the Sound about Cour, and later about Carradale; in November the catches were got about Carradale, on the Arran coast, and at Machrie Bay, but the fishing fell off towards the end of the month, and in December very little was got, and that at Machrie Bay. The total for the year was 25,453 crans, thus apportioned:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
12,499	1,157	3,527	156½	12	2,943½	5,053	105

In 1891 the aggregate was 30,998 crans, and the quantity landed before the end of May was the large one of 12,845 crans. The Officer's note is that the fishing from the beginning of January to the middle of February was "fairly good," and there is doubt as to whether all the herrings came from the Clyde. The fishing at Islay was still going on at the end of December, 1890, but on the other hand the Officer then noted (27th December) that there was said to be "a great appearance" in Kilbrennan Sound. In June the fishing was off Davaar, and south of it off Sanda, and in the channel of the Firth; also about Carradale and Machrie Bay, but most herrings were landed at Campbeltown. In July, while fishing still went on off Davaar, most were taken in Kilbrennan Sound, near Carradale, and in Machrie Bay; in August the fishing was off Isle of Ross to Carradale and from Carradale to Loch Ranza. Very little was caught in September, and then about Carradale, most of the boats going to other districts. In October the fishing was near Carradale, Machrie Bay, and south of the Sound. In November it was in Kilbrennan Sound, but little was caught, and none were taken in December. The quantities in the various months were as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
12,845	4,119	9,976	2,408½	146	1,244¼	359	—

For several years after this the fishing was under the average, and a summary may be given of the productive period, 1879–1891. In these thirteen years the lowest catch, in 1881, was 20,393 crans, and the highest 43,609, in 1882, the average for the whole being 34,305 crans, the aggregate catch in the period reaching a total of 445,960 crans. The average catch in each of the months was as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
5,592	2,554	6,706	4,806	3,383	4,853	4,124	2,285

The most productive month was thus July, followed by October, August, and November, there being a depression in September. July was the best month in four years and the second best in other two; August was the best in one year and the second best in five years; September was the best in one year and the second best in one year; October was the best in one year and second best in three years; November was the best in three years and second best in one year; December was the best in two years. Moreover, in the latter years of the period, from 1886 to 1890, the best month was November or December. The explanation is probably that on the whole the best catches are taken in the first part of the season, when the shoals are passing up Kilbrennan Sound, and then later when they are passing down.

In the years 1892–1898 the fishing was much less productive, the highest aggregate in any one year (1894) being 24,279 crans, and the lowest, in 1893, being 14,141 crans, the average for the seven years being 19,335 crans. The average catch in each of the months was:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3,147	3,450	5,919	2,651	1,568	1,259	545	797

July was thus the most productive month, and after that June. In five of the seven years July was the best month, and in the other two June. The feature of these years was the preponderance of the catch in the earlier months and the slenderness in the later months of the season. Thus, the percentages of the yield in the three months, June-August, and in the three months, October-December, as well as in the period up to 31st May, are shown for the two groups of years thus:—

		To end May.	June–August.	October–December.
1879–1891	..	16	41	33
1892–1898	..	16	62	13

It will be seen that the average catch in the lean years is greater in June than it is in the productive years, and that for July is not much less, while the greatest falling off is in the later months of the year.

In 1892 the quantity taken up to 31st May was 2193 crans, apparently from Kilbrennan Sound chiefly. In June the fishing was off Davaar southwards and near Carradale; in July the same, and later in the month between Isle of Ross and Davaar and near Carradale; in August it was off Carradale, up the Sound, and at Machrie Bay; in September the fishing fell off greatly; in October it improved, the herrings being taken in the upper reaches near Cour and Skipness; in November it was prosecuted at Machrie Bay and near Carradale, and the last were caught at Carradale in the week ended 17th December, the aggregate for the season being 18,164 crans, as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
2,193	2,817	9,156	2,005½	37¼	1,594	184	177

In 1893 the quantity up to the end of May was 3601 crans, the fishing as usual being in January and the first part of February. In June herrings were taken off Davaar, south of Arran, at Carradale, and at Cour. In July they were still procured in the lower reaches, off Davaar and Sanda, and the end of Arran, and in the Sound. In August the fishing was prosecuted in the Sound, and then it fell off, no herrings being landed in September, and only 3 crans in October. The fishing in November was again blank, no herrings being found in Kilbrennan Sound, but in December a few catches were got in Carradale Bay. The aggregate was 14,141 crans, as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3,601	2,511	5,782	2,067	—	3	—	177

In 1894 the fishing somewhat improved, the total being 24,279 crans, of which 5000 crans were landed before the end of May, herrings being abundant in Kilbrennan Sound in January and February. In June the fishing was off Davaar, south end Arran, and especially in Kilbrennan Sound. In July it was in the lower reaches, also the Sound and near Carradale; in August in the Sound, particularly near Carradale; during the rest of the season it was in the Sound of Kilbrennan, so far as stated. The season closed on 4th November, trials made in the early part of December yielding no herrings; but the Officer reports on 29th December that a good fishing had started at Carradale, and that boats were going thither. The monthly quantities were as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
5,000	7,844	3,967½	4,903½	2,017½	543	4	—

No doubt the fishing in January was very successful, as the catch up to 31st May, 1895, amounted to 7115½ crans. A note states that of this quantity 1271½ crans were landed at Campbeltown, 783½ at Carradale, while 5060½ crans were shipped by buying steamers in Kilbrennan Sound. In June the fishing was off Sanda, near Campbeltown, at the south end of Arran and Kintyre, and in Kilbrennan Sound. In July it was much the same, while in August Kilbrennan Sound is alone mentioned. The fishing fell off after this, there being no "appearance" of herrings in Kilbrennan Sound in September, but in October, November, and December small takes were got in the Sound, and the total for the season was 15,765½ crans, apportioned as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
7,115½	1,596	4,514½	2,076½	40	125	118	180

The catch in 1896, before the end of May, was 2914 crans, but no information is given as to the place or months of capture. In June the fishing was on the Arran side, between Brown Head and Machrie Bay, and also from Davaar to Sanda. In July there is little information, but at the end of the month the herrings were taken chiefly about Skipness This appears to have been the chief locality in August, and also 8–10 miles south of Davaar. In September the fishing was in Kilbrennan Sound, especially between Carradale and Skipness; in August it was the same, and between Pirnmill, Arran, and Machrie Bay; in November at Machrie Bay and on the Arran side, and in December the same, and near Carradale. The total for the year was 14,973 crans, as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
2,914	2,177	3,380	2,104	1,109	2,457	460	392

The quantity taken in 1897 was considerably greater, totalling 24,202 crans, of which only 393 crans were caught before the end of May. There is not much information as to the places of fishing in June, but at the end of the month the best fishing was between Sanda and Davaar. In July there were heavy takes in Kilbrennan Sound, particularly off Skipness, but also down as far as Campbeltown; but many of the boats went to Loch Fyne, where there were dense shoals of herrings. In August and September the fishing in the district was between Skipness and Carradale, and off Skipness; it was much the same in October, but then also at Machrie Bay, but the fishing fell off towards the end of the month. In November the herrings were still scarce in the Sound, and those obtained were got near Skipness, and, later, between Carradale and Pirnmill. In December the fishing continued poor, and it closed on the 25th. The monthly catches were as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
393	788	9,692	3,621	5,001	3,706	937	64

It is evident that the great shoals which had been in Loch Fyne this summer did not leave the region by Kilbrennan Sound, and the same conclusion may be drawn from the comparatively small quantity taken in 1898 up to the end of May, viz., 816 crans. In June of this year a large quantity of herrings were taken, the grounds being in Kilbrennan Sound, especially from Carradale to Skipness. There is no information given as to the place of fishing in July; in August it is only mentioned in the last week, when it was said to be at Skipness; in September it was between Machrie Bay and Carradale, and from Skipness to Machrie Bay; in October from Skipness to Carradale; in November at Machrie Bay; in December the best places were in the upper parts of Kilbrennan Sound, between Cour and Clonaig; later in Ardnacross Bay, near Campbeltown, near Carradale, and in Machrie Bay. At the end of December fishermen reported a "splendid appearance" of herrings on the coast. The aggregate quantity for the year was 23,817 crans, thus apportioned:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
816	6,421	4,937	1,780	2,771	387	2,116	4,589

With the revival of productive fishery at the end of the year the catches began to increase, and from 1899 to 1903 they were much above the average. The total quantity landed in these five years was 171,582 crans, giving an annual average of 34,316 crans, thus apportioned:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
4,504	4,070	8,068	9,493	4,607	1.360	942	1,271

Thus, 13 per cent. were taken up to the end of May, 63 per cent. in June–August, and 10 per cent. in October–December. In four of the years the best month was August, in the other year it was July, and in three years the second best month was July, in one it was August, and in the other September.

In 1899, the quantity taken to 31st May was 4120 crans; no information is given as to the localities or time of capture, and the information in most of the year is meagre. In June the herrings taken in the week ended 10th were secured near Carradale and Machrie Bay; in July those got in the week ended 22nd were taken in the Sound; in August the fishing was all over the Sound; in the week ended 16th September the fishing was also in the Sound, and probably during the rest of the month. On October 7th it was reported that there was a good "appearance" in the Sound; on 14th the fishing was best at Machrie Bay, and nothing was caught from this date until 17th November, chiefly, it would appear, from bad weather; the place of fishing is not mentioned. In the week ended 25th November heavy catches were secured close in on the Kintyre coast, and the shoal extended from Kildalloig Bay (immediately to the south of Davaar island) to Isle Ross, about four miles north of Davaar. At the beginning of December there was a good "appearance" about two miles north of Davaar; stormy weather came on, and trials made in the middle of the month were blank; it was believed the herrings had gone into deep water. On 23rd December a good "appearance" was reported between Carradale and Skipness, and in the last week of the year 178 crans were taken off Brown Head, Arran. The aggregate for the year was 31,898 crans, thus apportioned:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
4,120	4,259	6,049	6,939	6,135	1,488	2,717	191

The quantity caught up to the end of May, 1900, was 3994 crans. In June the fishing was in Kilbrennan Sound, and best between Carradale and Machrie Bay, and close inshore between Carradale and Campbeltown. In July it was between Saddell and Clonaig, and near Carradale; in August (when over 11,000 crans were landed) it was in the first week chiefly at Machrie Bay and near Saddell, then on the Arran shore between Machrie Bay and Pladda, and then in the vicinity of Skipness, Machrie Bay, and Carradale. In September the fishing was general over the Sound, best takes being got near Carradale, off Cour, and between Carradale and Pirnmill. In October the fishing was mostly in Machrie Bay and near it, and the herrings were said, towards the end of the month, to be gradually moving southwards. Very little was taken in November, though the weather was usually favourable for fishing; most were secured near the end of the month, close into the shore about four miles north of Campbeltown. It was then reported that there was a "splendid appearance" of herrings from Carradale to Campbeltown, but the weather in December was mostly boisterous, and those taken were secured in the week ended 8th, locality not mentioned, but it is said the herrings were making for the spawning ground off Brown Head, Arran, and that the milt and roe were very ripe. The total for the year was 40,557 crans, as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3,994	4,297	6,962	11,355	8,896	4,101	610	342

The fishing in the early months of 1891 was apparently good, for the quantity landed up to 31st May was 6097 crans. In June the grounds were, in the first week, on the Arran shore between Pirnmill and Machrie Bay, and in the last week near Cour, about midway between Carradale and Skipness. In July the fishing was between Carradale and Campbeltown, and on the Arran side, especially in Machrie Bay. In August it was in various places in Kilbrannan Sound, as Machrie Bay and near Carradale. In September, when 3241 crans were taken, there is no information; in the first week of October 864 crans were landed, after which the fishing fell off, the boats failing to get herrings; very little was got in the first part of November (at Clonaig and Carradale), but towards the end of the month some good takes were secured in

Ardnacross Bay, a few miles to the north of Campbeltown; in the early part of December (in which month 2406 crans were landed) the herrings were got in the same neighbourhood, and later on in Machrie Bay. The total for the year was 31,349 crans, as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
6,097	3,721	6,261	7,648	3,241	894	1,081	2,406

In 1902, the quantity taken up to the end of May was 3881 crans. In June the fishing was in Machrie Bay, at the south end of Arran, from Pirnmill to Brown Head, and at Cour Bay. In July, when 11,980 crans were landed, the fishing in the first week was mostly off the south end of Arran and at Cour, then between Carradale and Skipness, then on the Arran shore, and in the last week between Skipness and Carradale; the herrings were inferior, and largely small fish. In August the fishing was chiefly between Skipness and Carradale. This was also the case in the first two weeks of September, after which the fishing fell off, herrings getting scarce. Very little was got in October, and nothing from the Sound in November, the boats fishing chiefly in another district, between Garroch Head and the north of Arran. December was also blank until the week ended 27th, when 287 crans were taken in Saddell Bay, and in the closing week of the year 824 crans were caught between Saddell and Davaar. The total for the year was 38,016 crans, as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
3,881	4,895	11,980	11,727	4,071	317	30	1,115

From 1st January to 31st May, 1903, the quantity landed was 4430 crans. In June the fishing was mostly in Machrie Bay, near Carradale, at Skipness, Cour, Ross Isle, and Davaar. In July there is only information for the first week, when 962 crans were secured, mostly at Cour, Carradale, and Machrie Bay. After the first week in September the fishing fell off, and no herrings were landed from Kilbrennan Sound between the early part of September and the week ended 28th November, when 272 crans were got in Kildalloig Bay, near Campbeltown, and the herrings are described as very large, and full of milt and roe. In December, when 2301 crans were caught, the herrings were chiefly got between Isle Ross and Carradale, in Ardnacross Bay, Machrie Bay, and neighbourhood. The herrings were very large, running about 650 to a cran, very ripe, and some of them were spent. The aggregate quantity for the year was 29,762 crans, apportioned as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
4,430	3,180	9,088	9,797	694	--	272	2,301

In the years 1904–1906 the catch of herrings fell considerably. In the three years the aggregate quantity landed was 45,434 crans, the annual average being 15,145 crans. The averages for the various months were as follows:—

To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
4,939	2,609	4,387	2,496	318	85	47	263

The percentage up to 31st May was 33; for the three months June-August 63, and for the three months October-December, only 2·6. In each year July was the best month.

In 1904, 5872 crans were taken up to 31st May, but no information is given either as to the localities where the herrings were caught or the months. In June the fishing was chiefly near Carradale, at Machrie Bay, and between Skipness and Carradale. In July the herrings were mainly caught in Kilbrennan Sound, north of Carradale, Isle of Ross, and at Davaar; in August in Kilbrennan Sound; in September near Brown Head, Isle of Ross, and along the Arran shore. In October the fishing fell of; nothing was got in the Sound, what was landed being obtained between the islands of Pladda and Sanda, and between Pladda and Ailsa Craig. In November two crans got at Carradale represented the whole catch; they were taken in the week ended 26th. In December, with the exception of two crans taken in Carradale Bay at the beginning of the month, nothing was got until the week ended 21st, when 377 crans were caught in the vicinity of Isle Ross and Davaar, while in the next week 306 crans were secured at the same places and at Kildalloig Bay. They are described as fine large herrings, nearly ripe. The total for the year was 12,906 crans.

In 1905 the quantity landed between 1st January and 31st May was 5384 crans. In June the fishing was from Machrie Bay to Brown Head, then Carradale to Campbeltown, and later, from Crossaig to Torriedale, and Cour to Isle Ross. The fishing was chiefly from Carradale to Skipness, along the Arran shore, off Brown Head, and from Davaar to Pladda. In August it was in the Sound, and off Davaar and Pladda. In September only six crans were landed, five in the first week off the Arran shore, and most of the local crews had gone to the Ayrshire fishing. In October the herrings landed were mostly from other districts; but in the week ended 25th November, 64 crans were got at Ardnacross Bay, near Campbeltown, the herrings being described as large and full of milt and roe, none being spent. In December they were obtained in the same locality and at Isle Ross, but no large catches were secured. The total for the year was 21,458 crans.

In 1906 the quantity up to the end of May was 3562 crans. In June the fishing was good between Machrie Bay and Brown Head, and from Skipness to Davaar; in July the herrings were caught midway between Arran and Kintyre, between Carradale and Skipness, and near Davaar. In August the fishing fell off, herrings being got in small quantities in Machrie Bay and in the Sound. In September no herrings were taken till near the end of the month, on the Arran shore. In October only five crans were taken in the first week; and in November there was no fishing. In December only five crans were got in Kildalloig and Carradale Bays. The total for the year was very small, viz., 11,070 crans. In the three years the quantities taken were apportioned as follows:—

	To end May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1904 ..	5,872	1,550	1,938	1,772	869	218	2	685
1905 ..	5,384	2,886	7,737	5,175	6	32	138	100
1906 ..	3,562	3,392	3,486	541	79	5	—	5

Last year the catch was the smallest since 1878.

Inveraray District.

The limits of this district comprise the coast, lochs, and islands between Oban and Tayinloan, on the west side of Argyllshire, but the important area is Loch Fyne, within Ardlamont and Skipness Points. The herrings got elsewhere in the district are small in quantity, and the statistics dealt with, as before explained, represent substantially the product of the Loch Fyne fishery. The district included that of Campbeltown until 1863, when the latter was separated from it.

The gross quantity of herrings taken in Loch Fyne during the forty-four years, 1863–1906, amounted to 1,107,926 crans, giving an annual average of 25,180 crans. In the first twenty-two years, 1863 to 1884, the aggregate quantity of herrings landed was 505,702 crans, giving an annual average for the period of 22,986 crans. In the last twenty-two years, from 1885 to 1906, the aggregate quantity was 602,224 crans, giving an annual average of 27,375 crans. In the second half of the period there was thus an excess of 96,522 crans over the first half, the average increase per annum being 4,389 crans.

When the annual statistics are arranged in ten-yearly periods we have the following annual averages:—

(1857–66	22,567)	1887–96	30,943
1867–76	20,255½	1897–1906	24,889
1877–86	25,679½		

The averages when the figures are arranged in five-yearly periods are:—

(1862–66	22,567)	1887–91	30,201
1867–71	29,732	1892–96	31,685
1872–76	10,779	1897–1901	36,719
1877–81	21,053	1902–06	13,059
1882–86	30,306		

The annual fluctuations in the annual yield of the herring fishery in Loch Fyne have been great, ranging from a minimum of 3648 crans in 1873, 4806 in 1874, and 4672 in 1905, to maxima of 55,754 crans in 1882 and 56,820 crans in 1897. If we take the mean annual yield over the whole period, then the following years were under the average:—1863, 1864, 1871–1880, 1884, 1886–1888, 1895 and 1896, 1900, and 1903–1906. The periods of greatest scarcity were from 1872 to 1875 and 1904 to 1906. The most productive years were:—1867–1869, 1881–1883, 1890–1894, and 1897–1899.

The physical features of Loch Fyne will be fully dealt with later, but it may be said here that the loch is divided into two well-marked portions—a lower and wider part, extending from Ardlamont and Skipness Points to Otter Spit, where the water is almost everywhere deep, reaching 70, 80, and in some parts even 100 fathoms; and an upper and narrower part, commonly called Upper Loch Fyne, extending from Otter Spit to the head of the loch. This again may be divided into two parts, the lower, from Otter Spit to the vicinity of Furnace, being as a rule under 30 fathoms, while the upper part is generally much deeper, and may be over 70 or even 80 fathoms.

With regard to the fishing each year in the loch, it is chiefly important, if possible, to distinguish the productiveness of the upper and the lower lochs, and for a number of years the records enable this to be done.

In the earlier records, from 1854 to 1863, before the Campbeltown district was separated, notes are occasionally given throwing light on the fishing in Loch Fyne, and some extracts may be cited. In 1854 the first entry is in the week ending 1st July, and in that year there was a fishing in the upper loch, and apparently a good one. In August and October large catches were got from Skipness to Otter Spit; in November the fishing was chiefly about Skipness and Laggan, and down to Carradale; and in December good takes were got at Skipness, the herrings being large fish, running about 600 to a cran.

In 1855, the first entry is 16th June, but 1326 crans were caught from 1st January to 9th June in the district. It is stated that the herrings appeared in the loch earlier than was expected, and the fishermen were scarcely ready for them. In June the fishing was chiefly from the head of the loch to Otter, but also at Ardlamont and Tarbert. In July the fishing was very good in the upper loch, especially about Inveraray. In October, November, and December seiners were very successful about Skipness, the herrings being large and full of milt and roe.

In 1856, the first entry is 21st June; 1178 crans were caught in the district between 1st January and 14th June. Until August the fishing in the upper loch was poor; in November large quantities were taken at Ardlamont, and in December at and above Otter Ferry, and at Skipness.

In 1857, 1716 crans were landed in the district from 1st January to 13th June. In June some very large herrings were taken near Tarbert, those caught by the seine selling for 28s. 6d. for 120 fish, those taken by drift-net at 24s. per 120, and the lowest price was 14s. Here it may be mentioned that in those years the prices appear to be much higher, there being little competition comparatively on the East Coast. At Tarbert, in December 1854, cured herrings sold at 45s. a barrel. In July, August, and September the best fishing was in the upper loch, particularly at Inveraray, and the buoy ropes of the drift-nets in the latter month were 60 fathoms long, so that the herrings were in the deep water. In October the fishing was also largely up the loch, and in November good takes were got at Crarae.

In 1858 3000 crans were landed up to 26th June. In June and July the fishing up the loch was light, but from August to the end of the year it was chiefly in the upper loch, from Minard to Inveraray Seiners flocked thither, and riots occurred between them and the drifters.

In 1859, 3209 crans were landed to June 11th. In July and August the fishing in the upper loch was good; it fell off in September and October, but revived towards the end of November, especially about Minard, and 400 boats were fishing in the upper loch. It continued remarkably good in December, large quantities being caught about the middle of the month near Minard and Loch Gair, and towards the end in the lower loch, especially at Inverneil Bay, near Ardrishaig, and from there towards Tarbert. Some of the seiners got 200 crans in a haul, and about 500 boats were fishing in the lower loch.

In 1860 the Officer begins his record in January, in which month good catches were obtained by the seiners, but the fishing fell off towards the end, chiefly from bad weather, as large shoals were said to be in the lower loch and at Loch Gair. In February the fishing continued at Inverneil, the herrings being large, but many of them were spent. In March they were mostly spent, and the fishing extended to Skipness and Carradale; at the end of the month they were all spent. It thus appears that in the early months of 1860 a shoal of herrings spawned in the neighbourhood of Inverneil. In April little was done; at the end of May fishermen reported that they never had seen such an abundance of herrings in Loch Fyne at that period before. In June the fishing was apparently only in the lower loch; in July there was a light fishing in the upper loch, which improved in August and September. In October the fishing was chiefly between Otter and Tarbert, especially at Inverneil, also at Minard. In November the fishing was very successful between Otter and Tarbert (10,460 crans were landed in the district this month), and also in December between Ardlamont and Otter, and also at Inverneil and Loch Gair. The Officer now began to detail the catches, and the following for the weeks in December may be given:—

Week ended	Drift-net.		Seine-net.		Total.	
	Boats.	Crans.	Boats.	Crans.	Boats.	Crans.
8th ..	178	350	38	1,600	208	1,950
15th ..	180	350	48	2,100	228	2,450
22nd ..	150	380	40	2,050	190	2,430
29th ..	70	60	15	600	85	660
		1,140		6,350		7,490

From 1861 to 1876 the Officer noted the quantity taken in Upper Loch Fyne in each month of the year, which I have extracted in the accompanying Table.

TABLE showing the Number of Crans of Herrings taken in Upper Loch Fyne in each month of the years 1861–1876.

	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876
January ...	...	...	...	...	..	...	85	505	...	670	...	...	...	...	10	30
June ...	30	4	16	58	17	14	41	85	35	190	680	46	80	20	42	64
July ...	210	203	68	183	410	45	516	1015	1643	275	459	27	105	23	45	12
August ...	455	500	2115	1017	1620	2080	2542	800	723	273	11	7	...	11	...	...
September	132	?	2420	1195	2346	1160	551	2331	1640	81	17	3	...	8	...	...
October ...	457	8615	1310	461	917	1578	553	2245	148	30	...	...	...	...	...	...
November	331	6730	2719	254	125	554	1970	100	4	35	5	340	...	...	...	...
December	1120	4303	857	6	275	155	335	150	900	53	...	50	...	...	5	...
Total ...	2735	?	9505	3174	5710	5580	6593	7231	5093	1607	1172	473	185	62	102	106

It will be seen that in the years 1862–1869 large quantities of herrings were taken in Upper Loch Fyne, particularly in 1862 and 1863, and that after 1869 the quantity declined to a marked extent. This Table, however, represents the minimum, because many of the herrings landed at Ardrishaig were caught in the upper loch.

In 1861 the fishing in June was poor, and best at Minard; in July there was also little fishing in the upper loch, and again in September; in October the best fishing was at Inverneil, and then from Kilfinan to Ardlamont. In November the Officer remarks that there had been very little doing in the upper loch the whole season, and though the fishermen reported that there were abundance of herrings from Tarbert to Furnace they could not catch them. In December the fishing improved, especially between Minard and Furnace.

1862 was a very productive year, the total for the district (including Campbeltown) being 57,361 crans. From the records it appears that the approximate quantity taken in Loch Fyne was about 52,400 crans, the greater proportion of which was taken in the upper loch, and the best months were October and November. Until the end of July the fishing was light, especially in the upper loch; in the last week of the month the best fishing was between Inverneil and Skipness. In August it greatly improved both in the lower and the upper loch. In September it continued very productive, especially between Otter and Minard. In October as many as 550 boats were fishing in the upper loch, the best grounds being at the top, off Cairndow, and later from Furnace to Loch Gair. At the end of November there were 660 boats, and the best fishing was about Minard. During December the fishing was mostly from Minard to Loch Gair, and towards the end of the month also off Inverneil. When the season closed herrings were still abundant in both the upper and the lower loch, but no fishing took place in the early months of 1863, owing to the close time.

In 1863 the aggregate for Loch Fyne was 22,923 crans, and the fishing in June was poor. In July it improved, and was chiefly in the lower loch. In August it was much more productive in the upper loch about Inveraray; in September the fishing was chiefly from Furnace to the head of the loch, in October 530 boats were fishing in the upper loch; in November the best grounds were at Minard and then Minard to Loch Gair. In the early part of December good takes were obtained at Inverneil as well as above Otter, but the fishing fell off, and towards the end of the month the herrings were said to have left the loch.

In 1864 the herrings were chiefly taken in June in the lower loch; in July the best fishing was between Otter and Maol Dubh (between Tarbert and Ardrishaig); in August it greatly improved in the upper loch, and was good there in September, but after this it fell off in the upper loch, and in November and December little was got in Loch Fyne. The total for the year was 12,867 crans.

The yield from 1865 to 1870 was above the average, 1868 and 1869 being the best.

In 1865 the total was 26,118 crans, of which 5710 crans were secured in the upper loch. In June very little was caught; in July it improved towards the end of the month, but was still unimportant in the upper loch. In August most of the herrings were got in the lower loch, and the fishing in the upper loch was better; in September most were taken near Tarbert and Ardrishaig, and 2346 crans in the upper loch, in October the fishing was less successful, the herrings being mostly taken in the neighbourhood of Ardlamont; in November little was caught in the upper loch, those landed being chiefly got about Ardlamont. Towards the end of November the fishing fell off, and most of the boats went to the Kyles of Bute; in December very little was caught.

In 1866 the aggregate was 28,360 crans, of which 5580 were taken in Upper Loch Fyne. In June very little was caught, and chiefly about Otter. In July 45 crans were taken above Otter, after which the fishing improved in the upper loch, but throughout the year most were caught in the lower loch, the places not specified.

In 1867 the aggregate catch was 34,415 crans, of which 6593 crans were taken in the upper loch. In January 85 crans were got at Minard. In June the fishing was light; in August, when 13,456 crans were landed, most were got in the lower loch, the chief grounds being from Tarbert to Otter Spit, and 2542 crans were taken in the upper loch; in September most were taken in the lower loch, and also in October. In November most of the herrings were secured between Furnace and Loch Gair and Otter. In December the shoal moved farther down and good takes were obtained between Loch Gair and Otter, and at the end of the year a great shoal was reported to be in the upper loch.

In 1868 the aggregate for the year was 39,795 crans, of which 7231 crans were taken in the upper loch. In January 3038 crans were landed, 505 from the upper loch, and nearly all the rest were landed at Ardrishaig. In June the fishing was chiefly between Skipness and Otter Spit, very little being got in the upper loch. In July the fishing was very general all over the loch from the top of it to Skipness, and it continued thus till the latter part of October, some heavy catches with seines being got in October, near Inveraray. In November little was taken in Loch Fyne, the boats mostly leaving for Greenock, where a very good fishing was reported. In December the herrings were taken at Minard, but chiefly on the Cowal shore in the lower loch, and at the end of the month there was no "appearance" of herrings in Upper Loch Fyne, and it was believed the shoals had left.

From this year the productiveness of the fishing in Loch Fyne declined steadily to the year 1873, when it reached its lowest point.

In 1869 the aggregate catch amounted to 34,024 crans, of which 5093 were got in the upper loch. In January 763 crans were caught on the Cowal shore and about Ardlamont Point. In June the fishing was in the lower loch, little being caught above Otter till the end of the month, and then at Inveraray. In July the fishing improved in the upper loch, and a good "appearance" was reported from Skipness to Inveraray. In August the herrings were most plentiful about the mouth of the loch, and this was the case also in September. In October the fishing fell off in both upper and lower lochs, what was got being taken near the mouth of Loch Fyne and Ardlamont; towards the end of the month many boats left for Greenock, though a good "appearance" was reported between Tarbert and Ardrishaig. In November the fishing declined still further. In December the fishing revived, especially in the upper loch, where some heavy takes were secured.

In 1870 the quantity landed was 26,909 crans, of which 1607 were taken in the upper loch. The upper loch was thus the first to be affected in the decline of the period. In January a total of 935 crans were landed, of which 670 crans were got above Otter, and chiefly about Minard, and the rest were landed at Ardrishaig. The fishing in June was good, and all over the loch, but less was taken above Otter. In July and August nothing is said about the fishing grounds, but the catch in the upper loch was small. In September and October the fishing was at the mouth of Loch Fyne, and about Skipness and Ardlamont; this was also the case in November, though in this month the shoal shifted for a short time to Kilfinan Bay, where good takes were got. In December some were got at Loch Gair, but most of those taken were caught at the mouth of the loch.

In the six years, 1865–1870, all above the average, the aggregate quantity of herrings taken was 189,621 crans, giving an annual average of 31,603 crans. They were thus apportioned, the figures representing the average catch:—

Jan.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
858	1,923	4,854	9,255	6,777	4,878	1,908	1,149

The percentage taken in January was 2·7, in June–August 51, and in October–December 25. In three of the years August was the best month, and in one each July, September, and October.

All the years 1871–1880 were below the average, and the quantities taken in the years 1871–1875 were especially small.

In 1871 the aggregate was 13,515 crans, or about half of what the catch was in the previous year; of this quantity only 1172 crans were taken in the upper loch. In January, 1840 crans were taken, all about Skipness and the upper part of Kilbrennan Sound, where a shoal was reported to be. On 3rd June it was reported that herrings appeared to extend all the way from Skipness to Furnace, and in this month 3415 crans were taken, the best of the year, of which 680 were got in the upper loch; at the end of the month a prosperous season was anticipated. In July the herrings were scarcer, and at the end of the month the fishermen were getting discouraged, and they blamed the heavy rains for having driven the herrings away, or into deep water. In August it was still more disappointing, the fishing being, as it had been from the first, chiefly between Tarbert and Skipness, towards the mouth of the loch, and the fishermen did not remember a season when herrings were so scarce in the loch. In September the fishing was only about Skipness, the total for the month being 717 crans. In October it improved, but was still only at the mouth of the loch. During the rest of the year few herrings were caught in Loch Fyne, most of the fish in November and December being taken about Skipness and the adjacent part of Kilbrennan Sound.

In 1872 the aggregate was less, viz., 9057 crans, of which 473 were got in the upper loch. In January trials were made, but no herrings caught. In June only 715 crans were landed, nearly all from Skipness; it was the same in July, the fishing being at Skipness and up to near Tarbert. In August also nothing was got except about Skipness and in Kilbrennan Sound; "there is nothing to be got in Loch Fyne," said the Officer on August 6th, "but a few mackerel." In September and October such fishing as there was was about the mouth of the loch, at Skipness and Kilbrennan Sound, occasionally at Ardlamont. In November an improvement took place, and herrings were caught from about Ardlamont to above Otter, and in the next week (ended 23rd) part of the shoal had got up to Minard, and in the last week of the month good hauls were got from Tarbert to Minard. In the early part of December the fishermen said the herrings had left the upper loch and moved rapidly towards Skipness and Kilbrennan Sound, and 700 crans were taken in the first week. After this only a few were got at Skipness.

In 1873 the total for the year sank to 3648 crans, the lowest in all the records, and of this 185 crans were got in the upper loch. There was no "appearance" of herrings in January. In June and July the fishing was poor, those got being obtained mostly near Tarbert. In August only 134 crans were landed, and most of them it would appear came from Kilbrennan Sound. The same conditions prevailed during the rest of the season, most of the boats which continued the fishing doing so in Kilbrennan Sound, returning at the end of the week, and most of the herrings landed in September and October came from other waters apparently. There was no fishing after October, and meetings of fishermen were held at Ardrishaig complaining of seining, which, it was believed by many, was a cause of the dearth.

In 1874 the aggregate for the year was but little higher, namely, 4806 crans, of which 62 were obtained in the upper loch. No trials were made in January, and there is no record of any "appearance" of herrings. In June, trammels were tried at various places in Upper Loch Fyne, and a few herrings were got all the way up to Inveraray; some herrings were also taken between Kilfinan and Maol Dubh, in the lower loch, and near Tarbert. At the end of the month it was reported that there was an abundance of very small herrings between Otter Ferry and Crarae. In July the fishing was at the mouth of Loch Fyne, and as many mackerel as herrings were taken. In August only 917 crans were landed, some of which were got at and near Skipness, but apparently the greater proportion in Kilbrennan Sound. In September, and until the close of the season, the boats fished mostly at the mouth of the loch and in Kilbrennan Sound; in November a few crans of very small herrings were caught at Inverneil.

The aggregate for 1875 was much better, reaching 13,546 crans, of which 102 were obtained in the upper loch. In January ten crans were landed, all caught in the upper loch, near Minard, and they were very small fish, running from 1600 to 2000 to a cran. The catch in June was very small, only 650 crans, and the herrings were taken mostly near Skipness also on the Cowal shore, and on both sides of Otter Spit and near Minard. It was reported that there was abundance of small-sized herrings in the upper loch. In July the catch rose to a total of 5675 crans. nearly all caught between Skipness and Tarbert, and they were mostly large and fine fish; only 45 crans were taken in the upper loch, and the herrings were small. In August 4069 crans were taken, mostly near Tarbert and between Tarbert and Ardrishaig, and the Officer notes that the herrings were further up the loch than they had been for some years. The total in September was only 425 crans, though the weather was fine, and the herrings were very small and inferior. The fishing improved in October, when 1202 crans were secured, most being apparently got about Skipness, but the place is not always stated. The catch in November was a little higher, viz., 1215 crans; most of them were taken in the first week near Tarbert. In the week ended 27th, the weather being favourable, a thorough search was made, but only 30 crans were got, and it was believed the shoals had left. On the other hand, great quantities of herring fry, measuring from 1½ to 2 inches, were about Otter Spit, as many as from 15 to 20 being got in the stomach of coalfish which were caught there. At the beginning of December a small shoal struck in near Laggan, and during the month 295 crans were taken there, and between it and Tarbert. In the last week of the year five crans of very small herrings were taken in the upper loch, ranging from 1600 to 1800 to a cran. A feature of the year was the abundance of very small herrings in Upper Loch Fyne, and in the lower loch also the quality was usually very mixed, small fish often predominating.

In the five years 1871-1875, the gross quantity of herrings landed was 44,572 crans, giving an annual average of 8914 crans, thus apportioned:—

June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1,308	2,588	1,900	788	939	786	232

The percentage for the months June-August was 65, and for the months October-December, 22.

In 1876 the aggregate for the year was nearly up to the average, viz., 22,836 crans, and only 106 crans of this, so far as the records go, were taken in the upper loch. The detailed records, however, stating the quantity taken in the upper loch in each week come to an end in July this year, and it is probable that the quantity taken there was greater. On 15th January a trial made with the seine-net at Kilmichael Beg in the upper loch resulted in a body of herrings being enclosed, but only thirty crans were secured; trials later in the month at Minard were blank. In June some were taken in Upper Loch Fyne, and the fishermen reported a good "appearance" there. In July there is little information, but on 22nd it is noted that the herrings are widely spread from a little above Otter Ferry to Skipness and Ardlamont. In August the fishing was all over the lower loch, especially between Tarbert and Skipness; in September it was chiefly about Ardlamont and Skipness. In October nearly all the herrings were landed at Tarbert; in the week ended 28th no less than 5300 crans were caught about Skipness, and the quality was good, the number of herrings to a cran ranging between 700 and 900. In November a large body of herrings still remained about the mouth of the loch, most being taken between Skipness and Tarbert, and about Skipness. None were caught in December, the shoal having gone down Kilbrennan Sound.

In 1877 the aggregate catch fell to 19,618 crans. There was no appearance of herrings in January, and some trials which were made were unsuccessful. In June, when 2614 crans were landed, herrings were got all over the loch, but chiefly between Tarbert and Skipness. In July the fishing was almost entirely in the lower loch, chiefly at the mouth, and it thus continued in August, September, October, and November, most being taken in the vicinity of Skipness. The fishing fell off in November, and no herrings were caught in December.

In 1878 the aggregate catch fell to 8890 crans. In June the fishing was mostly about the entrance to the upper loch, and a good "appearance" was reported in the lower loch. In July, when most herrings were taken, the fishing was all over the lower loch, and as far up as Minard, and the "appearance" continued good. In August the weather was very fine, but the fishing fell off, and scarcely anything was taken in September and October. In the first week of November trials were made but no herrings taken; in the next week good takes were got at Skipness, where a large shoal was reported to be; in the third week the fishing was between Skipness and Tarbert, and later up to Ardrishaig and about Otter Spit, but it fell off, and very little was taken in December.

From this year until 1882 there was a gradual increase in the quantity of herrings landed.

In 1879 the aggregate was 21,045 crans. In June and July the fishing was all over the lower loch, and best between Skipness and Tarbert; at the end of June and in July herrings were also got near Inveraray and at the top of the loch. In the early part of August the fishing was over the upper and lower loch, but the best grounds continued to be about the mouth of the loch between Tarbert and Skipness, where large shoals were seen. Until the early part of November the fishing continued about the mouth and especially near Skipness; later it fell off, and a few crans of very small herrings were got in the upper loch. None were caught in December.

In 1880 the aggregate was 22,768 crans. In June the grounds were between Skipness and Tarbert and about the entrance to the upper loch, and till the early part of August most of the herrings were got at the former locality, and then also at Ardlamont and between Ardlamont and Tarbert. During the rest of the season the fishing was towards the mouth of the loch, particularly between Tarbert and Skipness, and about Skipness, and the drift-nets were more successful than the seines, which was not the case, the Officer remarks, in the previous few years. In November herrings were caught in considerable quantities between Ardlamont and Skipness, and also between Inverneil and Tarbert; later at various parts of the lower loch, especially towards Ardrishaig and

Tarbert, and in December near the mouth of the loch between Skate Island and Skipness. It is remarked that during the whole season the drift-net was more successful than the seine.

In 1881 the aggregate rose to 32,943 crans. In June the fishing was successful, and the herrings large and superior; they were nearly all taken by seines. In the early part of the month they were got between Skipness and Tarbert and near Otter; later also all over the upper loch as far as Inveraray. In July the particulars are scanty, but the fishing went on in both the upper and the lower loch. In August, when 9546 crans were landed, the fishing was almost only about Tarbert, little being caught in the upper loch. Till the end of October the fishing was chiefly between Tarbert and Skipness; then a shoal appeared between Ardlamont and Kilfinan; but in November and December the herrings were mostly secured between Inverneil and Skipness.

In 1882 the catch was the very high one of 55,754 crans. At the beginning of June some herrings were taken near Skipness and Otter Spit; most of those landed were caught between Skipness and Tarbert, and at the end of the month some were taken a few miles up the upper loch, and the fishermen reported that the herrings were gradually finding their way up the loch, and they expected a good fishing. In July 7860 crans were landed. Information is not given as to the place of fishing, but it appears to have been chiefly in the lower loch; in the first week it was principally about Laggan. In August it is stated that the fishing is all over the lower loch, and that the seine has been the more successful all season, and that nothing is doing above Otter. In this month 11,878 crans were landed. In September, when 8320 crans were taken, the only information is for the week ended 23rd, the principal grounds then being from Ardlamont to Otter; on the 9th it was remarked that there were still "immense shoals" in the lower loch. In October 12,663 crans were landed. In the week ended 14th it is stated that the grounds were quite close to Ardrishaig, and that no herrings were being got in the upper loch; later, that the grounds were from Ardrishaig to Tarbert. In the week ended 28th, 5240 crans were landed, 3000 crans on one day, and both drift-nets and seines did well. In November the grounds were still between Tarbert and Ardrishaig chiefly, and 11,424 crans were caught. The fishing fell off at the beginning of December, the shoals having left the loch. The fishing in this most productive year was thus almost exclusively in the lower loch.

In 1883 the total dropped to 36,109 crans. In June the grounds were chiefly between Tarbert and Ardrishaig, and 3304 crans were landed. In July, when 8465 crans were taken, the grounds were between Ardrishaig and Skipness, but a good fishing was also obtained in the upper loch. In August the localities are not mentioned, but the grounds appear to have extended from Otter Spit to Skipness and Ardlamont; one seine-net crew got a haul of 218 crans of "splendid" herrings, which realised no less than £557. In September nothing is said about the place of fishing; a single seine-net haul was sufficient to load five or six boats, and realised £575. On 6th October the Officer remarks that "It is almost incredible the large amount of money the Loch Fyne fishermen have earned since the middle of June. They never experienced such a remunerative season as this," and he mentions that the price ranged in that week from £2 15s. to £3 10s. per cran. In this month most of the herrings were got between Tarbert and Skipness, and also near Ardrishaig. In November there is no information as to the place of fishing; towards the end of the month the fishing fell off, and only 12 crans were landed in December.

In 1884 the catch fell below the average, viz., to 15,756 crans. In June there was a "splendid appearance" of herrings all over the lower loch, and the large quantity of 5154 crans were landed, but the localities of capture are not mentioned. In July, it is only stated that some good takes were got about Lochgair and Minard, but the bulk of the 3275 crans landed were doubtless got in the lower loch; the quality was very inferior, the herrings being small—the smallest and poorest for a number of years. The place of fishing in August is again omitted, but most herrings appear to have been landed at Tarbert; at the end of the month mackerel were more abundant than herrings. In September most of the fishing seems to have been in the neighbourhood of Tarbert and near Skipness; mackerel and saith, or coalfish, continued to be abundant. In October little was caught, and it was at the mouth of the loch, and most of the boats were fishing in Kilbrennan Sound. In November there was no "appearance" of herrings in Loch Fyne, and the trials made were unsuccessful, so that no herrings were landed in this month, or in December.

In 1885 the total catch was above the average, reaching 28,847 crans, most being taken in June and July. In June the catch was a record one for that month, viz., 7187 crans, and nearly all were secured in the lower loch, on the eastern side, during the first part of the month, and then between Ardrishaig and Tarbert. Several good takes were got above Otter Spit. In July 7244 crans were landed; at the beginning of the month there was a good "appearance" all over the lower loch and as far up as Minard, but the localities where the herrings were taken are not mentioned. In August most of the catch was landed at Tarbert, and the grounds were probably near the mouth of the loch; the same remark applies to September, and it appears that several of the crews were working in Kilbrennan Sound. In October the week ended 10th was the best of the season, 3050 crans being taken, and the place of fishing was at the entrance to the loch and about Skipness. Only three crans were taken after 17th October, the shoals having left, and the fishing came to an end.

In 1886 the catch fell to 15,062 crans. On 5th June the Officer states—"Owing to the fair success of the fishing during the month of May (the catch to date being 2334 crans), and the splendid appearance of herrings in the loch, fishermen made an early start." Much of the fish recorded for June appear thus to have been caught in May. In June the fishing was near Ardrishaig, and from Tarbert to Otter Ferry, and also as far up as Inveraray. In July the best fishing was in the upper loch near Inveraray. In August the fishing seems to have been both in the upper and lower lochs; mackerel were abundant, and some of the seine-net herrings were so small as to be unmarketable. In September the fishing was less productive, and was apparently mostly about Tarbert. At the latter part of this month the fishing fell off; there was little appearance of herrings, and what was taken was got at the mouth of the loch, about Skipness and the upper part of Kilbrennan Sound, and the fish were small and inferior, and this continued all the rest of the season.

In 1887 the aggregate was 14,360 crans. In May 1032 crans were secured, most being taken about Tarbert and on the opposite shore, at the entrance to the upper loch, and a few in the upper loch. In June they were taken chiefly near Ardrishaig, about Otter Spit, and some above Inveraray; at the end of the month the Officer notes that as yet few herrings had been taken below Tarbert. In July the herrings were caught mostly in the vicinity of Tarbert, near Skipness, at Otter Spit, and in the upper loch. In August the catch fell off; in the first week they were taken in the neighbourhood of Tarbert, but there is no information as to the place of fishing from then till 17th September, when it is recorded that the fishing was very light in the upper loch, and that most of the boats were fishing in Kilbrennan Sound. In the early part of October none were taken in Loch Fyne; later, some were got near Tarbert and Ardlamont. In November only 198 crans were secured, mostly opposite Tarbert, and the fishing ended at the beginning of December.

From 1887 to 1891 the quantity taken gradually increased each year.

In 1888 the total amounted to 20,258 crans. In June, when 1111 crans were landed, the fishing was chiefly in the upper loch, by drift-nets. In July the quantity was 7147 crans, and the herrings were taken all over the loch, but mostly in the vicinity of Tarbert. In August 8640 crans were landed; there is no information as to locality for the first two weeks, but for the remainder of the month the fish were secured in the lower loch. In September the quantity fell to 1919 crans, mostly caught about Tarbert and Skipness. In October the quantity was 1092 crans, taken at the mouth of the loch, especially near Ardlamont. In November only 349 crans were obtained, all caught at the mouth of the loch, near Skipness, and none were taken in December.

In 1889 the aggregate was 29,865½ crans, of which 1830 crans were obtained in June, but the only information as to locality is that few were caught in the upper loch. In July 6364 crans were taken, mostly between Ardrishaig and Skipness, few being got in the upper loch. In August the catch was 5267 crans, mostly on the same grounds, and towards the end of the month off Skipness and Ardlamont Point. In September 3843½ crans were secured, chiefly off Laggan, about three or four miles south of Tarbert, and there was no "appearance" in the upper loch. A large quantity was landed in October, viz., 10,125 crans; in the first week most were caught between Tarbert and Skipness, but in the remainder of the month the best fishing was on the east side of the lower loch, south of Ardrishaig, and opposite Tarbert. In November the catch fell to 2436 crans, mostly got between Kilfinan and Ardlamont on the east side. In this year apparently few herrings were taken in Upper Loch Fyne.

In 1890 the aggregate catch amounted to 38,291½ crans. The quantity landed in June was 1936 crans; they were at first taken in small numbers all over the loch from Skipness to above Inveraray, then chiefly about Skipness and Tarbert, and later, near Ardrishaig. On the 21st, it is noted that a large shoal of herrings had entered the loch and were moving up along the west side towards Ardrishaig. In July the large quantity of 12,303 crans were landed, which is the largest for that month in the records. The great bulk of the catch was got on the east side of the lower loch, opposite Tarbert, and near Skate Island, but herrings were caught more or less all over the lower loch, while few were obtained in the upper loch. In August 8254 crans were taken, mostly opposite Tarbert, about Yellow Island and Buck Island. In September the catch fell to 3809½ crans, most of the herrings being caught about Yellow Island, and towards the end of the month on the west shore, near Laggan. In October the catch was 3285 crans, taken partly on the east side near Yellow Island, and between Skate Island and Ardlamont, and partly near Laggan and near Skipness. In November the catch was still higher, viz., 3463 crans, near Ardrishaig, between Ardrishaig and Tarbert, and also in the upper loch, especially in the vicinity of Minard. In December 5241 crans were landed, mostly taken about Otter Spit and the entrance to the upper loch, in the upper loch, and towards the end of the month also along the east side of the lower loch.

In 1891 the aggregate was 48,228 crans. In June it is recorded that several dense shoals entered the loch in May, and the best fishing was in the upper loch, though takes were got all over the loch. In July, when 10,283 crans were landed, most were got between Tarbert and Ardrishaig, between Tarbert and Skipness, about Skipness, and near Ardlamont. In August the catch fell to 3783¾ crans, and in September to 3639¼ crans, the herrings being taken on the same grounds as in July. In October 9388 crans were landed, most of them being taken off Castleton, along the east shore of the loch, near Ardrishaig, and above Otter Spit. The dense shoals which had entered the loch in June had retired to deep water, and were now breaking up preparatory to leaving the loch. In November the very large quantity of 11,038 crans was secured, 5001 in the first week in Kilfinan Bay and between Strachur and Otter Spit, and during the remainder of the month, and particularly in the last week, off Inveraray and at Minard; the bulk were thus taken in the upper loch. In December the unprecedented catch for that month of 7937 crans was taken, at first in the upper loch and best near Minard, then in the lower loch on the east side, particularly about Kilfinan Bay; in the week ended 31st December, 4493 crans were landed, chiefly from the upper loch, near Minard.

From 1891 to 1895 the annual yield was gradually reduced to a point considerably below the average.

In 1892 the aggregate was not much lower, viz., 47,408½ crans. In June, when 4509 crans were taken, the herrings were caught all over the loch, but chiefly between Skipness and Tarbert, and near Inveraray. In July 9206 crans were landed, taken all over the upper and lower loch, but mostly between Skipness and Tarbert, also near Ardrishaig. In August the catch amounted to 11,129 crans, caught mostly between Skipness and Laggan, but all over the loch as far as Inveraray. In September the total was 8406½ crans, by far the greater part being got between Skate Island and Ardlamont, and between Tarbert and Skipness. In October the catch totalled 3641 crans, nearly all from the upper loch, and particularly between Furnace and Inveraray. Several dense shoals were reported to be in the upper loch, but keeping in the deep water in the central channel. In November the total was 3377 crans, practically all from the upper loch, and mostly between Minard and Strachur. In December 7140 crans were landed, by far the greater part being caught in the upper loch, between Minard and Otter Spit.

In 1893 the aggregate catch amounted to 36,389½ crans. In June 3251 crans were landed, the fishing being all over the loch, but best near Tarbert and in the vicinity of Minard. In July 10,802½ crans were taken, also all over the loch, but best at Ardlamont and on the opposite side near Laggan. The quantity got in August was 10,075½ crans, and the herrings were caught both in the upper and the lower loch, in the latter chiefly about Skate Island. In September the catch fell to 2700½ crans, caught near Skate Island, between Tarbert and Ardrishaig, and in the upper loch. The total in October was only 705 crans; herrings were reported to be plentiful in the upper loch between Minard and Inveraray, but they stayed in the deep water, what were taken being caught by drift-nets down to 30 and 40 fathoms from the surface. At the beginning of November the shoal began to move from the deep water, and most of the 4416 crans secured were got between Minard and Otter, and from Minard to Inveraray, chiefly by seines. In December 4439 crans were taken, mostly about Minard and Loch Gair.

In 1894 the aggregate catch was slightly greater, viz., 38,367 crans. In June, most of the 3049 crans got were apparently taken in the lower loch, as at Skipness. In July 10,827 crans were landed, and they were nearly all taken in the upper loch, especially from Minard to Inveraray. In August the catch totalled 9320 crans, also got in the upper loch, between Crarae and Inveraray. In September 3024 crans were secured, almost all in the upper loch, from Minard to Inveraray, and especially in the upper reaches about and above Inveraray. The catch in October again fell, the quantity taken being 1041 crans, and they were got in the upper loch in the vicinity of Inveraray and Strachur by drift-nets, sunk as far from the surface as 40 to 60 fathoms, but the fishermen stated that the shoal was at the bottom in deeper water. In November the catch was 3100 crans, apparently all from the upper loch; during the first three weeks they were caught by drift nets, but at the end of the month heavy catches were secured by seines at the head of the loch, near Cairndow. In December the catch was the high one of 7451 crans, and they were taken in the lower parts of the upper loch, from Minard and Furnace to Otter Spit, and Ardrishaig and Inverneil in the lower loch. At the end of the year herrings were said to be still abundant in the upper loch.

In 1895 the total amounted to 17,853 crans, of which 1090 crans were caught between 1st January and 1st June, but the locality and time are not specified. In June 2117 crans were taken all over the loch, but mostly about Tarbert and in the upper loch. In July the catch was 4271 crans, most being got in the upper loch. The total in August was somewhat greater, 5508 crans, mostly got in the upper loch, especially between Strachur and Cairndow, but also near Tarbert, and between Tarbert and Skipness. In September the aggregate fell to 1674 crans, mostly taken in the upper reaches of the upper loch. Only 155 crans were obtained in October, apparently chiefly about Skipness. In November 1800 crans were taken, chiefly in the upper loch, but also between Tarbert and Ardrishaig. The catch in December was rather less, 1238 crans, and mostly secured between Tarbert and Ardrishaig, as at Inverneil. In this year, therefore, the bulk of the herrings were caught in the upper loch.

The aggregate catch in 1896 was 18,406 crans, of which 2012 crans were caught between 1st January and 1st June, without specification of locality being given. In June the herrings appear to have been mostly caught in the upper loch. In July, and, indeed, throughout the whole year, by far the larger quantity was taken in the upper loch, and in the upper reaches of it; but in August and in October it is stated that catches were got near Tarbert, and between Tarbert and Skipness. No information is given for the first two weeks in December, in which month only 324 crans were secured; in the third week it is stated that the fishing in the upper loch was blank, and that the herrings taken in that week were got between Tarbert and Skipness. In the last week of the year there was no "appearance" of herrings in the loch. The bulk of the catch in this year was again from the upper loch; and it is noted in the closing months of the year that the herrings taken by seine were very small and inferior, the fishermen often allowing them to escape as being too small for market.

The year 1897 was the most productive in the period from 1863 (or 1854) to 1906, and it is interesting from the fact that it is the only instance where a very good year follows a year below the average. The aggregate amounted to 56,820 crans, thus apportioned:—

To 1st June.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
849	1,756	5,876	10,797	19,900	6,316	5,763	5,563

The localities and months in which the herrings taken before June were caught are not mentioned. In June, when the total was a comparatively small one, the herrings were got in both the lower and the upper loch. In July there is no information in three of the weeks as to the place of fishing; in the other weeks it was "all over loch." In August, again, when the fishing was very successful, no place is specified, but in the week ended 21st it is said that there are large shoals all over the loch. The total for September was the enormous one of 19,900 crans, the largest for any month in the period from 1854. In the two first weeks, when 9930 crans were landed, the fishing was "all over the loch"; in the next week, when the catch was 4046 crans, it is stated that the best fishing was from Minard to Silver Craigs, in the upper loch, and along the Kilfinan shore in the lower loch; in the next week no information is given and in the last week the fishing was all over the loch. In October 6316 crans were secured, but there is information as to the places of capture only for the last two weeks, when most were caught off Loch Gair, Silver Craigs, and on Kilfinan shore. In November the catch amounted to 5763 crans, the localities when mentioned being off Loch Gair and all over the loch. Particulars are given in December for only the first week, when 2045 crans were taken, mostly in the upper loch, from Otter Ferry to opposite Newton.

The aggregate in 1898 amounted to 40,801 crans, of which 736 crans were secured before 1st June. In June 4252 crans were caught between Skipness and Furnace.

In 1899 the total was 32,113 crans. In June the fishing was all over the loch, principally from Skipness to Minard. In July, when 8552 crans were taken, it was also generally distributed from Otter Spit to Cairndow and down to Tarbert. In August it appears to have been chiefly in the upper loch, as was also the case in September, but the information is meagre. No information is given as to the place of fishing from the week ended 7th October, when it was in the upper loch mostly, until the week ended 18th November, when it was in the upper and lower lochs, especially about Loch Gair. In December the herrings were caught mainly in the upper reaches and opposite Tarbert.

In 1900 the catch fell to 24,743 crans. In June the herrings were caught between Skipness and Otter, and especially about Otter. In July, when 7523 crans were secured, the only information is for the week ended 21st, when the fishing was best about Minard. The information for the remainder of the year is scanty; in August and the first part of September the fishing seems to have been chiefly in the upper loch and about Tarbert. After this the only localities mentioned are Laggan and Skipness, Skate Island and Ardlamont, and between Ardrishaig and Tarbert; in most of the weeks no particulars are given.

In 1901 there was a slight increase in the aggregate, to 29,117 crans. The information as to the localities of fishing in this year is very inadequate; of the thirty-two weeks included no particulars are given for twenty-two of them. In June, herrings were taken near Otter and from Otter to Laggan; in July, some were taken near Inveraray; in August, Skipness to Tarbert is mentioned; in September the fishing was probably mostly in the upper loch; in November, Otter, Skipness, and Inveraray are mentioned, and in December, Otter.

In 1902 the aggregate was 26,339 crans. In June and July the places mentioned are Laggan and Otter; in August, Laggan and Tarbert to Skipness, and also the upper loch; in September and October the fishing appears to have been mostly in the same quarters; in November and December the upper loch, near Ardlamont, Kilfinan Bay, and latterly near

Otter are the places mentioned. In these months most of the boats were, however, fishing in the Kyles of Bute.

In 1903 the catch was 21,198 crans. In June the herrings were taken at first near Skipness and Laggan, then from Tarbert to Otter and at Otter. In July, Otter and Laggan are mentioned, and also the upper loch; in August the fishing was apparently in the upper loch, but in September the chief grounds were about Ardlamont, and up from there along the east side of the lower loch. The Officer notes on 5th September that the fishermen thought the herrings were about to enter the Kyles of Bute, as they did in the previous year. In October there was little "appearance" in Loch Fyne, the fishing chiefly going on in the Kyles. In November only 111 crans were landed, the boats fishing mostly in the Kyles, and thus in Rothesay district. In December the quantity taken was 642 crans, some of which at least were caught near Skate Island.

In 1904 the catch fell to 7827 crans. In May it is noted that the herrings had not yet made their appearance in Loch Fyne, and the boats were fishing for the most part in Kilbrennan Sound. In June the places mentioned are near Otter, south of Tarbert, and the upper loch, and the herrings were apparently chiefly taken in the upper loch. In July the fishing was mostly in the upper loch and south of Tarbert. In August it appears to have been in the upper loch and near Ardlamont; it was the same in September, and at the end of the month the boats were fishing chiefly in the Kyles of Bute, and about Inchmarnock. In October only 13 crans were landed, and they were taken in the upper loch. No herrings were taken in November, and in December the few caught were secured mostly at Minard, between Minard and Furnace, and near Ardlamont.

In 1905 the catch was the lowest since 1873, aggregating only 4672 crans, less than is sometimes taken in a single week. They were apportioned as follow:—

To 28th April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
558	970	512	440	327	210	328	419	908.

May and December were thus the best months. In May the herrings were taken at Otter Spit, near Ardlamont and Skipness, and also in the upper loch, near Minard. In June some were taken in the vicinity of Skipness, between Skipness and Tarbert, at Otter and near Minard. In July they were chiefly caught about Skipness and in the upper loch. Those taken in August were secured mostly in the upper loch, about Crarae and off Newton, and some about Skipness. In September the herrings were taken almost entirely in the upper loch, principally near Strachur. In October small catches were got at Ardlamont, Skate Island, Kilfinan, and Skipness in the lower loch, and at Strachur and near Inveraray in the upper loch. It was reported that there were many herrings in the upper loch, but that they were keeping in deep water, and the fish were of a very large size. In November a few herrings were got about Skipness and Laggan and also in the upper loch. In December 908 crans were taken, mostly about Minard and Loch Gair, in the upper loch.

In 1906 the catch was but little greater, the total being 5258 crans, of which 234 crans were taken before 28th April. The quantities in each month were as follows:—

To 28th April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
234	522	706	1,022	286	699	1,484	255	50

In May the herrings were caught about Laggan, Kilfinan, and Loch Gair. In June and July most of the fish were secured between Skipness and Tarbert, especially between Laggan and Skipness, also at Ardlamont, and in the upper loch at the end of July. Mackerel were said to be plentiful in the loch in the latter part of July. In August herrings were very scarce in the lower loch, but some were caught near Newton in the upper loch. On the 18th, it was reported that the shoals which had been on the east side of Arran were moving up towards Loch Fyne, but in the next week it is noted that they had turned back. In September the fishing was mostly in other districts, especially at Garroch Head and off the east of Arran. In October, which was the best month of the year, the herrings were secured between Skate Island and Ardlamont, about Inchmarnock, and between Arran and Bute. In November and December the weather was mostly unsettled, and few herrings were caught. On 8th Deccember the Officer notes that the shoal which had been lying in the upper reaches of the loch had left unobserved, the general opinion of the fishermen being that the herrings had gone south to the spawning banks.

Campbeltown and Inveraray Districts Combined.

It has already been explained that these districts were combined from the year 1854, when the records begin, until 1863, and I have accordingly combined in the Tables (IX.–XXIII., pp. 114, 179), the totals for the two districts since 1863 in order to allow a comparison to be made as to the fluctuations for the last 53 years. The two districts are contiguous, and the boats of the one often fish within the limits of the other. The statistics relate essentially to the area of water which extends from the south end of Kilbrennan Sound up to the top of Loch Fyne, and represent the yield in this long stretch of narrow waters. In the 53 years the total quantity of herrings taken in it amounted to about 2,304,950 crans, or 8,067,300 cwts., the annual average for the whole period being 43,490 crans. If this period be divided into two parts of 26 years each, viz., 1854–1879, and 1881–1906, and a comparison made between them, it will be seen that the second half was all but twice as productive as the first. In the years 1854–1879 the quantity was 775,058 crans, the annual average being 29,810 crans, while in the years 1881–1906 the quantity was 1,469,604 crans, with an annual average catch of 56,523 crans. The annual average excess in the second period over the average in the first was no less than 26,713 crans, which shows how the herring fishery in this region of the Clyde has been developed. This development has been much more in the southern part of the area, in the district of Campbeltown, than in Loch Fyne.

When the figures are arranged in ten-year periods, the annual averages for each period are as follows:—

1857–66	29,557	1887–96	57,101
1867–76	28,440	1897–1906	51,392
1877–86	54,966		

Arranged in five-year periods, the averages, in both cases in crans, are these:—

1857–61	27,712	1882–86	66,267
1862–66	31,402	1887–91	65,053
1867–71	34,689	1892–96	49,149
1872–76	22,191	1897–1901	67,083
1877–81	43,665	1902–06	35,701

A comparison of the tables referred to and of the curves (Pl. IV.) shows that in certain cases the fluctuations in the two districts are complementary, a rise in one being associated with a fall in the other, and in other instances they fluctuate together, both rising or both falling in the same year.

Thus in the period when the productiveness of the fishing in Loch Fyne was least, in 1872–1874, there was a rise in the yield in the Campbeltown district, and it fell again as the Loch Fyne fishing improved, conditions which might be explained on the assumption that shoals which usually entered Loch Fyne from Kilbrennan Sound remained in the Sound in those years. The figures for the years 1871 to 1875 are as follows:—

	Campbeltown.	Loch Fyne.	Total.
1871	5,063	13,515	18,578
1872	15,432	9,057	24,489
1873	15,891	3,648	19,539
1874	15,400	4,806	20,206
1875	3,065	13,546	16,611

The same sort of relationship is shown in the years 1884–1890, the number of crans taken in the two districts in each of those years being as follows:—

	Campbeltown.	Loch Fyne.	Total.
1884	33,572	15,756	49,328
1885	36,842	28,847	65,689
1886	29,318	15,062	44,380
1887	43,535	14,360	57,895
1888	41,369	20,258	61,627
1889	32,906	29,865	62,771
1890	25,453	38,291	63,744

But in the years 1895 and 1896, when the yield in Loch Fyne was low, the yield in the Campbeltown district was also low, viz:—

	Campbeltown.	Loch Fyne.	Total.
1895	15,765	17,853	33,618
1896	14,973	18,406	33,379

In the first portion of the period of recent depression in Loch Fyne (from about 1900 to last year), the catch in the Campbeltown district was above the average, but in the last three years it fell below it, as the following figures show:—

	Campbeltown.	Loch Fyne.	Total.
1899	31,898	32,113	64,011
1900	40,557	24,743	65,300
1901	31,349	29,117	60,466
1902	38,016	26,339	64,355
1903	29,762	21,198	50,960
1904	12,906	7,827	20,733
1905	21,458	4,672	26,130
1906	11,070	5,258	16,328

A possible explanation is that the shoals that usually visit the area did not in the first part of the period of depression penetrate in large numbers beyond Kilbrennan Sound, and then withdrew from it more and more; so that while the aggregate catch for the whole area remained much about the same at first, it latterly fell off.

If we take the period of years from 1887 to 1899, during which the catch in Loch Fyne was high above the average except for the two years 1895, 1896, we shall find the curve for the Campbeltown district, *when smoothed*, forms a depression of regular form. The figures are as follows:—

	Campbeltown.	Loch Fyne.		Campbeltown.	Loch Fyne.
1887 ..	43,535	14,360	1894 ..	18,062	30,870
1888 ..	39,270	21,495	1895 ..	18,339	24,875
1889 ..	33,243	29,472	1896 ..	18,313	31,026
1890 ..	29,786	38,795	1897 ..	20,997	38,676
1891 ..	24,872	44,643	1898 ..	26,639	43,245
1892 ..	21,091	44,009	1899 ..	32,091	32,552
1893 ..	18,861	40,722	1900 ..	31,349	24,743

In one or two years, and notably in 1882, quantities much above the average were taken in both districts; in that year the highest recorded for the Campbeltown district was landed (43,609 crans), and the second highest for Loch Fyne (55,754 crans), the aggregate for the two districts being 99,363 crans.

THE CLYDE AREA.

According to the weekly returns, the aggregate quantity of herrings taken in the five districts which comprise the whole of the Clyde area since 1854 has amounted to 3,314,585 crans, or about 11,601,000 cwts., the annual average for the period being 62,540 crans. Comparison between the first twenty-six years and the last twenty-six years shows that the herring fishery has been much more productive in the latter period.

Years.	Crans Landed.	Average per annum.
1854–1879 ..	1,254,902	48,270
1881–1906 ..	1,950,849	75,030
Excess ..	695,947	26,760

If the statistics are arranged in ten-year periods, the annual averages come out as follows:—

1857–66 ..	46,225½	1887–96 ..	74,523½
1867–76 ..	51,454½	1897–1906 ..	67,518
1877–86 ..	81,523½		

And the averages for periods of five years are:—

1857–61 ..	32,955	882–86	89,732
1862–66 ..	59,496	1887–91 ..	93,212
1867–71 ..	68,417	1892–96 ..	55,835
1872–76 ..	34,492	1897–1901 ..	74,495
1877–81 ..	73,315	1902–06 ..	60,541

The maximum quantity landed in any one year was in 1882, when the aggregate amounted to 119,130 crans; and the total was over 100,000 crans on other five occasions, viz., in 1880, 1883, 1890, 1891, and 1902. The minimum quantity was 17,080 crans in 1854; in 1861 the quantity was 20,307 crans, and in 1904 it was 29,992 crans.

The curve formed from the annual figures (Pl. IV.) shows that, in the first twenty-six years, the only years in which the quantity of herrings landed was above the mean for the whole period were 1862, and 1865 to 1870; in the second twenty-six years, the only years below the mean for the whole period were 1886, 1893, 1895, 1896, and 1904–1906. he periods of greatest scarcity were from 1871 to 1878, and especially 1873–1875; 1893 to 1901, and 1904 to 1906. The mean annual quantities in those years were as follows:—

	Crans.		Crans.
1871–78 ..	37,510	1895–96 ..	39,380
1873–75 ..	30,458	1904–06 ..	40,132
1893–1901..	64,079		

It is not intended at present to enter in any detail into the fluctuations of the catch of herrings from year to year in the various districts of the Clyde, but attention may be drawn to one or two features of interest.

One of these relates to the penetration of the upper reaches of the Clyde by shoals of herrings, as described in the foregoing accounts of the districts. Thus, if the tables and curves for the Rothesay and Greenock districts be examined, and the foregoing account referred to, it will be evident that large shoals of herrings penetrated to the upper parts of the Clyde in the years 1864–1872. In 1862 a few herrings were taken in the Kyles of Bute and Loch Riddon in November and December, but the total only amounted to 109 crans. In the autumn of the following year, and especially in December, much larger quantities were caught in the lower parts of the Kyles and in Loch Riddon; in 1864 the shoals appeared in greater numbers, fishing in the Kyles beginning at the latter part of September and continuing to the end of December, the herrings in this year penetrating to Loch Striven and Port Bannatyne, but none apparently reaching the northern lochs (Loch Long, Loch Goil), and the fishing ending in December. In 1865 the same thing is repeated, shoals setting into the Kyles about the middle of September, penetrating to Loch Striven and Port Bannatyne, and a successful fishing going on to the end of January. In 1866 a similar movement occurs, but in this year the herrings penetrate at the end of November and the beginning of December to Loch Long. In 1867 the fishing was in the Kyles and the northern lochs. Up to this year it appears to be probable that the herrings made their way to the north by the Kyles of Bute, extending farther and farther up the Clyde. But in 1868 the herrings coming from the south seem to have come by another route to the east side of Bute, and the grounds this year were in the Greenock district, opposite that town, and also in Lochs Long and Goil. In 1869 both routes appear to have been followed, abundance of herrings being taken in the Kyles, in the northern lochs, and off Greenock. In 1870 the fishing was much less successful, and was chiefly in Loch Striven, the northern lochs, and in the channel of the Clyde, and in this year the herrings appear to have come by the eastern route. In 1871 comparatively little was taken in the Kyles, the herrings being chiefly in the northern lochs and the channel of the Clyde, and the total catch was much diminished. In 1872 the catch was still less and chiefly in the northern lochs, while in the following year the shoals did not visit either the Kyles or the lochs, and did not come back for many years. The quantities of herrings taken in October, November, December, and January in each season were as follows, in crans:—

	1863–64	1864–65	1865–66	1866–67	1867–68	1868–69	1869–70	1870–71	1871–72	1872–73
Rothesay District .	3,655	33,428	37,896	37,257	18,346	7,984	20,285	15,400	9,376	7,585
Greenock District .	—	—	—	—	—	32,685	14,657	1,635	1,100	—

The records of the Rothesay district show that in the years 1887–1891 herrings were again got in considerable numbers in Lochs Long, Goil, Striven, and in the Kyles, but in these years they were taken in the early part of the season, and there was no productive winter fishing in the region till 1902. In that year, in the months of November and December and in January 1903, between 28,000 and 29,000 crans were caught in the Kyles of Bute and Loch Riddon. In 1903 the shoal again entered the Kyles about the middle of October, and from then till the end of January about 19,000 crans were taken. At the end of September, 1904, the herrings again visited the Kyles and Loch Riddon, but disappeared from those waters about the middle of October; and in the following year there was practically no fishing in the Kyles, the chief fishing being between the Ayrshire coast and Arran. In August and September, 1906, the principal fishing ground was also close to the east side of Arran, from which the shoals moved northwards, and a considerable winter fishing was established opposite Greenock and in the Gareloch in the winter 1906–7. It is of interest to note that after an interval of about thirty-six years the shoals should again penetrate at the end of the year to the upper reaches of the Clyde.

One fact of considerable interest that is brought out is that the fluctuations in two successive years are rarely extreme; it is uncommon for a very good year to be followed by a very bad one, or for a very bad year to be followed by a very good one; the rule being for several years in succession to be bad or good. An examination of the curves of the annual yield of the various districts will make this clear. Thus, as above described, the shoals of herrings frequented the upper reaches of the Clyde in the winter months for a number of years from 1863 on, and gradually withdrew. The curve for the Ballantrae district also shows the abundant shoals that visited that part of the coast in the years 1878 to 1881, and again in 1883–1885, and the great scarcity in the years from 1892 to 1899.

The curve showing the annual fluctuations in Loch Fyne deserves special attention. It will be seen from it that as a general rule the good years and the bad years come in groups, and that only on one occasion, 1897, a very good year follows a year in which the yield was below the average. The years in which the yield was above and below the mean for the whole period from 1863 to 1906 may be arranged as follows, those below the line representing the years below the average, and those above it the years above the average:—

1865–70 1881–83 1885 1889–94 1897–99 1901–02

1863–64 1871–80 1884 1886–88 1895–96 1900 1903–06

An examination of the curve (Pl. II.) shows, moreover, that the recent period of depression closely resembles that which began in 1871, the years 1872–1874 being very similar, both in regard to absolute quantities of the herrings caught and in relation to one another, to the years 1904–1906. It will also be seen that in the various periods there are never more than two very bad years in succession, viz., 1873–1874, 1886–1887, 1895–1896. Judging, therefore, from all these circumstances, it may with some probability be inferred that the catch in 1907 will be higher than in 1906, though likely still under the average.*

In order to be able to compare the extent of the annual fluctuations in the yield of herrings in Loch Fyne with the fluctuations on other parts of the coast, I have had tables prepared showing for the period for which statistics are available, 1889–1906, the annual yield and the percentage above and below the mean catch for two East Coast districts, Anstruther and Peterhead, Loch Carron, and for the whole Clyde, the whole of the West Coast, and the whole of the East Coast.

TABLE showing the Total Quantity of Herrings Caught (in Crans) per year from 1889 to 1906, and the Percentage above or below the average catch for the period given.

	ANSTRUTHER.			PETERHEAD.			LOCH CARRON.		
	Mean, 27,739 Crans.			Mean, 144,003 Crans.			Mean, 28,057 Crans.		
Year.	Total Crans.	% above Mean.	% below Mean.	Total Crans.	% above Mean.	% below Mean.	Total Crans.	% above Mean.	% below Mean.
1889	20,069	...	27·7	167,705	16·5	...	36,882	31·5	...
1890	7,419	...	73·3	159,986	11·1	...	39,782	41·8	...
1	10,989	...	60·4	115,251	...	20·0	41,465	47·8	...
2	10,037	...	63·8	157,949	37·5	...	24,108	...	14·1
3	29,995	8·1	...	200,871	39·5	...	63,890	127·7	...
4	15,495	...	44·1	181,953	26·4	...	34,199	21·9	...
5	12,853	...	53·7	168,958	17·3	...	41,513	48·0	...
6	13,155	...	52·6	166,897	15·9	...	26,110	...	6·9
7	14,500	...	47·7	77,847	...	45·9	8,762	...	68·8
8	9,719	...	65·0	192,622	33·8	...	13,565	...	55·2
9	23,644	...	14·8	63,821	...	55·7	37,418	33·4	...
1900	47,590	71·6	...	63,276	...	56·1	60,816	116·8	...
1	47,369	70·8	...	68,124	...	52·7	31,319	11·6	...
2	57,554	107·5	...	147,215	2·2	...	8,307	...	70·4
3	38,694	39·5	...	133,890	...	7·0	18,927	...	32·5
4	44,625	60·9	...	172,645	19·9	...	14,254	...	49·2
5	45,531	64·1	...	161,945	12·5	...	2,480	...	91·2
6	50,059	80·4	...	191,092	32·7	...	1,225	...	95·6

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*The catch in Lochfyne during the present season (1907) is considerably above the catch in 1905 and 1906, as shown by the following figures (crans) for corresponding dates :—

1903.	1904.	1905.	1906.	1907.
(17th Oct.)	(22nd Oct.)	(21st Oct.)	(20th Oct.)	(19th Oct.)
20,415	7633	3324	4953	13,348

[TABLE.

TABLE showing the Total Quantity of Herrings Caught (in Crans) per year from 1889 to 1906, and the Percentage above or below the average catch for the period given.

	LOCH FYNE.			WHOLE CLYDE.			WEST COAST.			EAST COAST.		
	Mean, 29,094 Crans.			Mean, 69,512 Crans.			Mean, 222,314 Crans.			Mean, 698,007 Crans.		
Year.	Total Crans.	% above Mean.	% below Mean.	Total Crans.	% above Mean.	% below Mean.	Total Crans.	% above Mean.	% below Mean.	Total Crans.	% above Mean.	% below Mean.
1889	29,865½	2·7	...	87,357	25·7	..	193,711	...	12·9	814,550	16·7	..
1890	38,291½	31·6	...	102,733	47·8	...	283,093	27·3	...	758,258	8·6	...
1	48,228	65·8	...	106,774½	53·6	...	357,772	60·9	..	550,275	...	21·2
2	47,408½	62·9	...	74,940	7·8	...	249,042	12·0	...	748,684	7·3	...
3	36,389½	25·1	...	57,691	...	17·0	266,093	19·7	...	902,385	29·3	...
4	38,367	31·9	...	67,783½	...	2·5	189,483	...	14·8	807,935	15·7	..
5	17,853	...	38·6	40,332½	...	42·0	198,071	...	10·9	777,426	11·4	...
6	18,406	...	36·7	38,428	...	44·7	169,835	...	23·6	807,136	15·6	...
7	56,820	95·3	...	86,996	25·2	...	229,669	3·3	...	429,627	...	38·4
8	40,801	40·2	...	68,357	...	1·7	249,732	12·3	...	870,695	24·5	...
9	32,113	10·4	...	71,110½	2·3	...	215,823	...	2·9	434,957	...	37·7
1900	24,743	...	15·0	72,935	4·9	...	238,967	7·5	...	436,573	...	37·5
1	29,117	0·04	...	73,078½	5·1	...	202,983	...	8·7	550,376	...	21·1
2	26,339	...	9·5	100,397	44·4	...	232,553	4·6	...	783,024	15·0	...
3	21,198	...	27·1	81,905	17·8	...	203,625	...	8·4	680,476	...	2·5
4	7,827	...	73·1	29,992	...	56·9	185,794	...	16·4	781,886	12·0	...
5	4,672	...	83·9	36,802	...	47·1	177,046	...	20·4	660,929	...	5·3
6	5,258	...	81·9	53,601	...	22·9	158,356	...	38·8	768,929	10·2	...

The mean annual quantity for Loch Fyne, Anstruther, and Loch Carron district is very much the same, and it will be seen that the range of variation from the mean in different years, or the amount of annual fluctuation, is greater in the Loch Carron district than in Loch Fyne, while it is practically the same in the Anstruther district as it is in Loch Fyne. One may conclude, theretore, that the fluctuations in Loch Fyne are not abnormally great, and are such as might be expected under natural conditions.

It may be noted, further, in connection with the fluctuations in Loch Fyne that the bad years, in which the quantity of herrings caught is small, are, as a rule, characterised by a scarcity of herrings in the later months of the season. This is shown in the following table showing the percentage proportions taken per month over the whole period, and in the best and the worst years :—

	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1863–1906	9·1	22·4	23·7	16·35	12·1	9·1	5·8
Five best years ..	6·1	17·2	18·1	20·1	15·4	12·8	8·8
Four worst years ..	16·2	25·2	9·1	13·3	14·8	3·8	5·2

In the whole period the mean proportion taken in the last three months is 27 per cent. of the whole ; in the five best years it is 37 per cent., and in the four worst years it is 23.8 per cent.

THE INFLUENCE OF THE MOON ON THE CATCH OF HERRINGS.

It is a common opinion that the changes of the moon have an influence on the catches of herrings, and since the weekly reports offered

FIRTH OF CLYDE AND LOCH FYNE

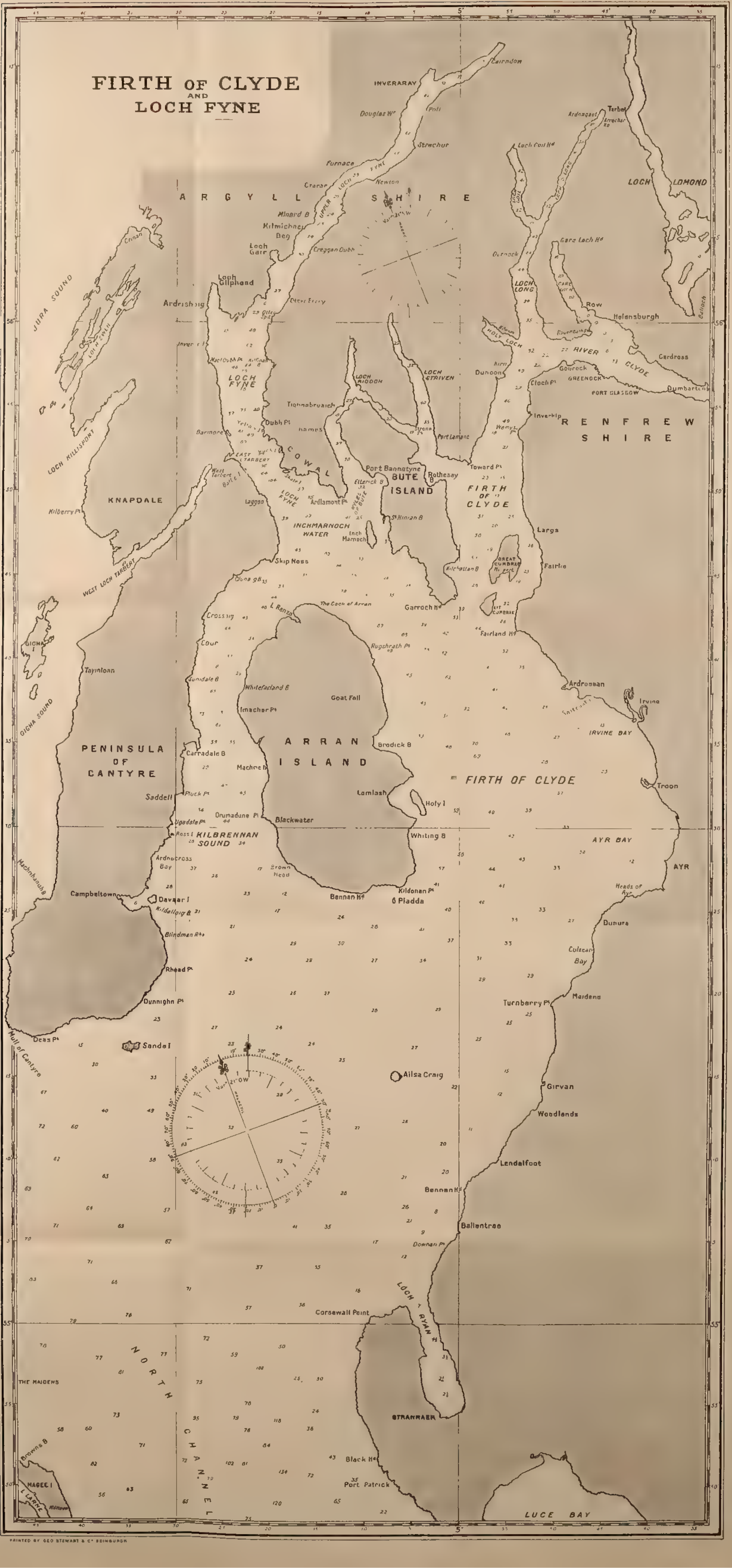

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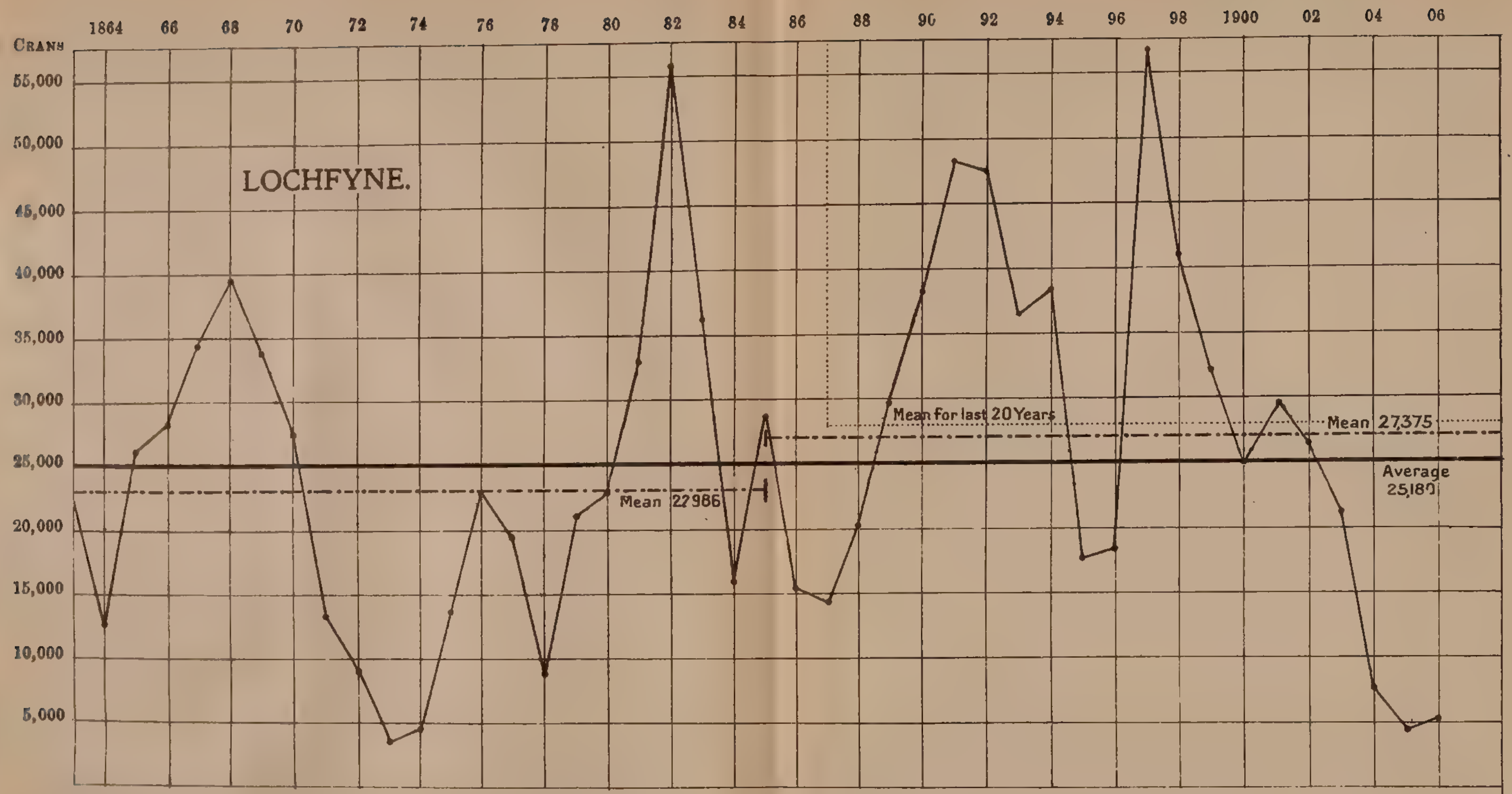
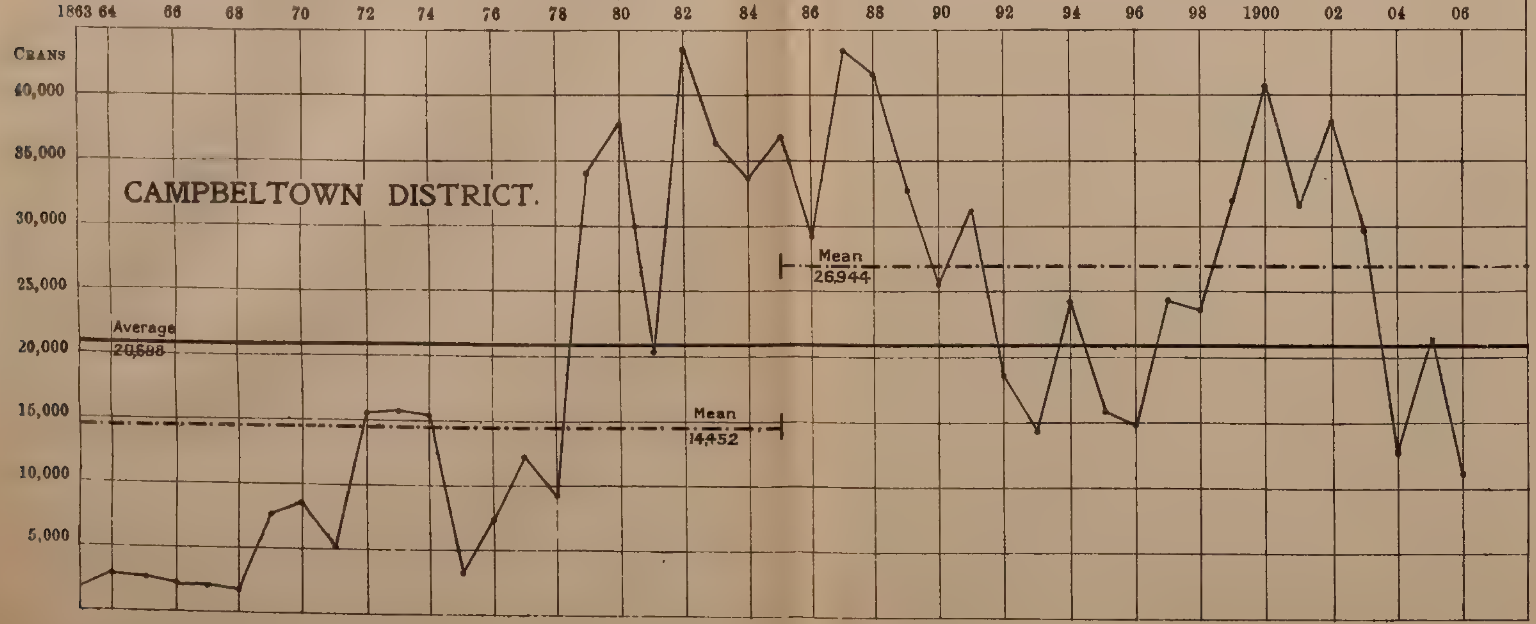
PLATE II.


LOCHFYNE.
CRANS
55,000
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
1864 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 1900 02 04 06
Mean for last 20 Years
Mean 27,375
Average 25,180
Mean 22,986


CAMPBELTOWN DISTRICT.
CRANS
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
1863 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 1900 02 04 06
Mean 26,944
Average 20,588
Mean 14,452

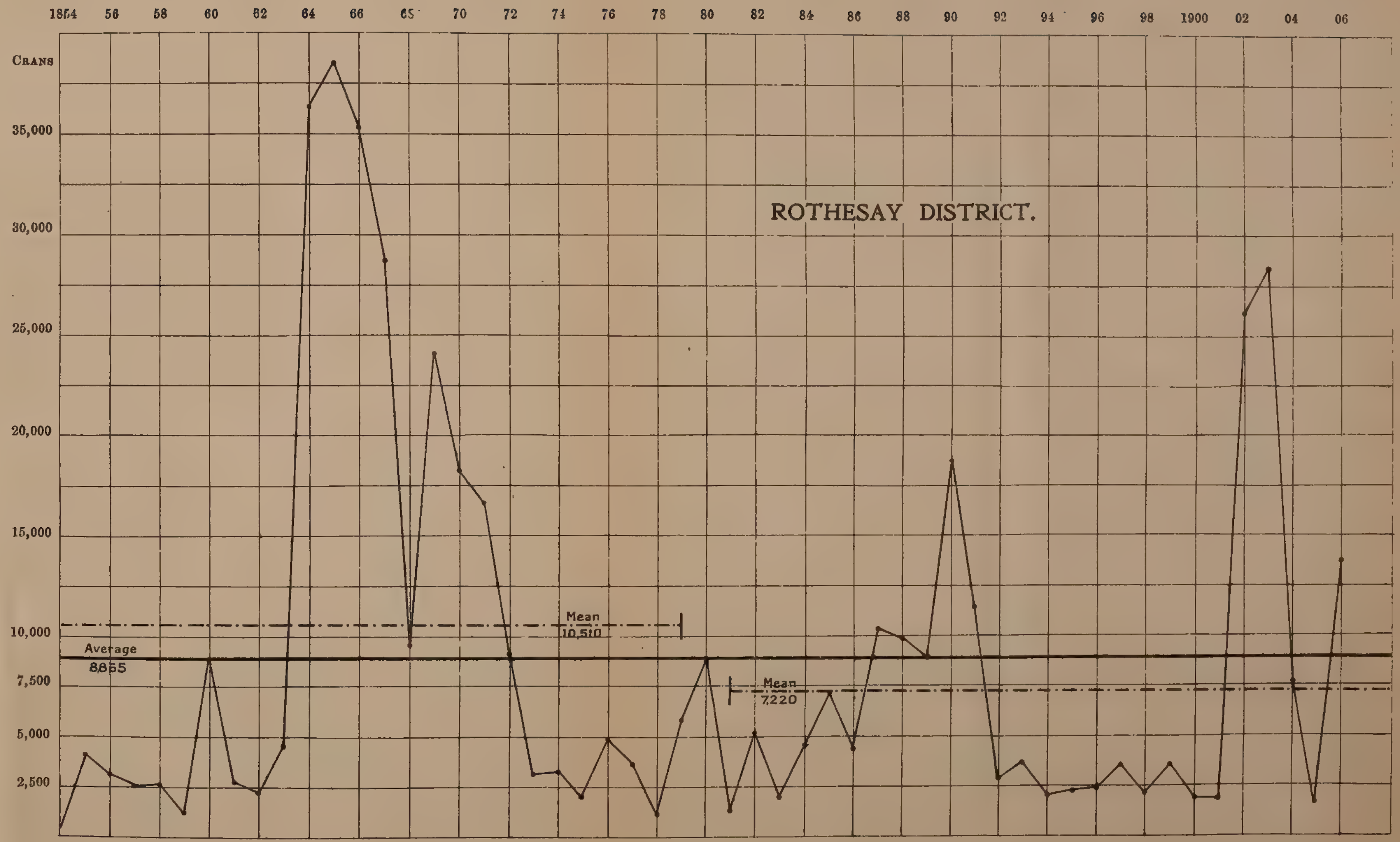
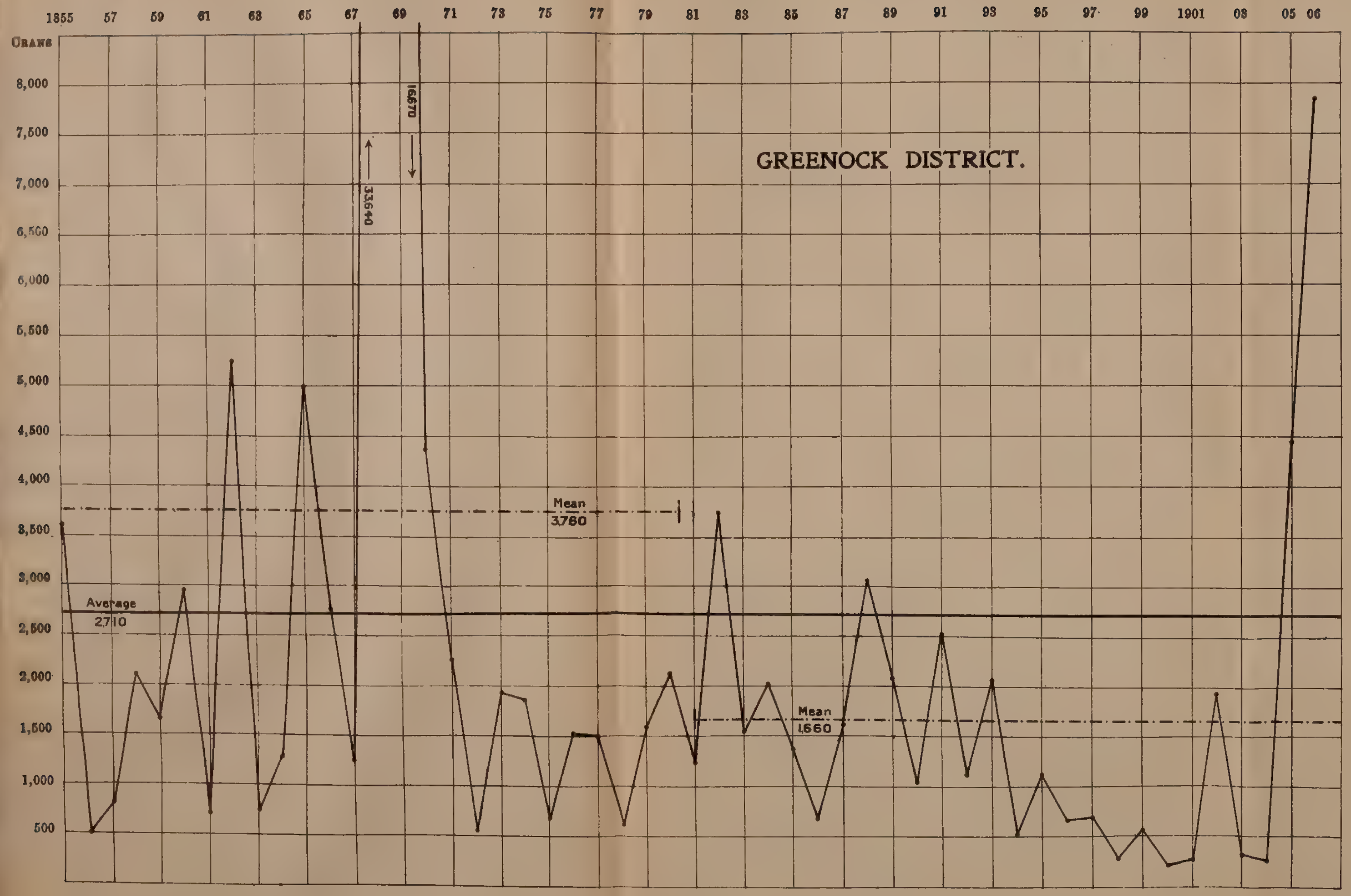

ROTHESAY DISTRICT.
CRANS
35,000
30,000
25,000
20,000
15,000
10,000
7,500
5,000
2,500
1854 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 1900 02 04 06
Mean 10,510
Average 8,855
Mean 7,220

Plate III.


GREENOCK DISTRICT.
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16670
Mean
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Average
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Mean
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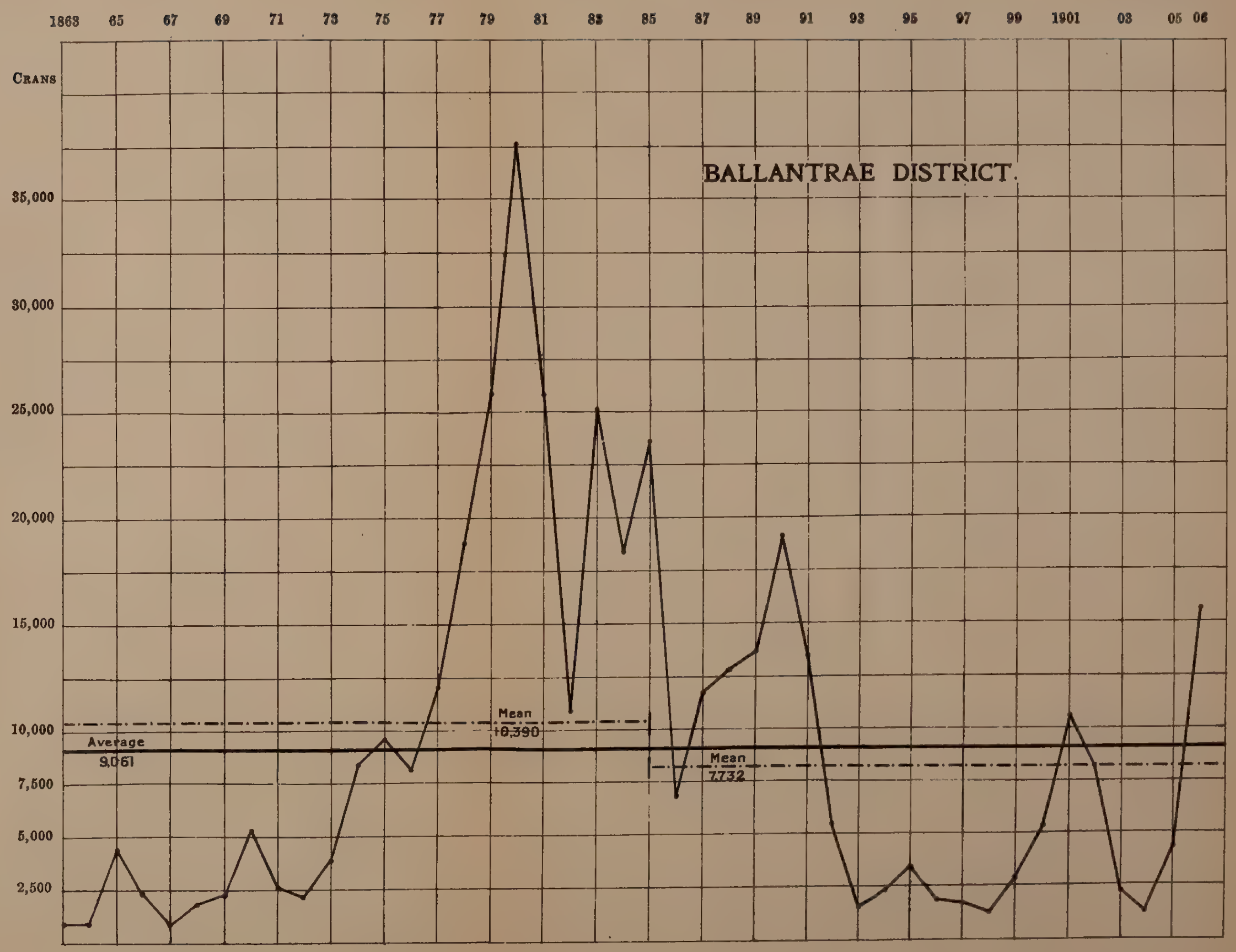
BALLANTRAE DISTRICT.
Crans
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20,000
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7,500
5,000
2,500
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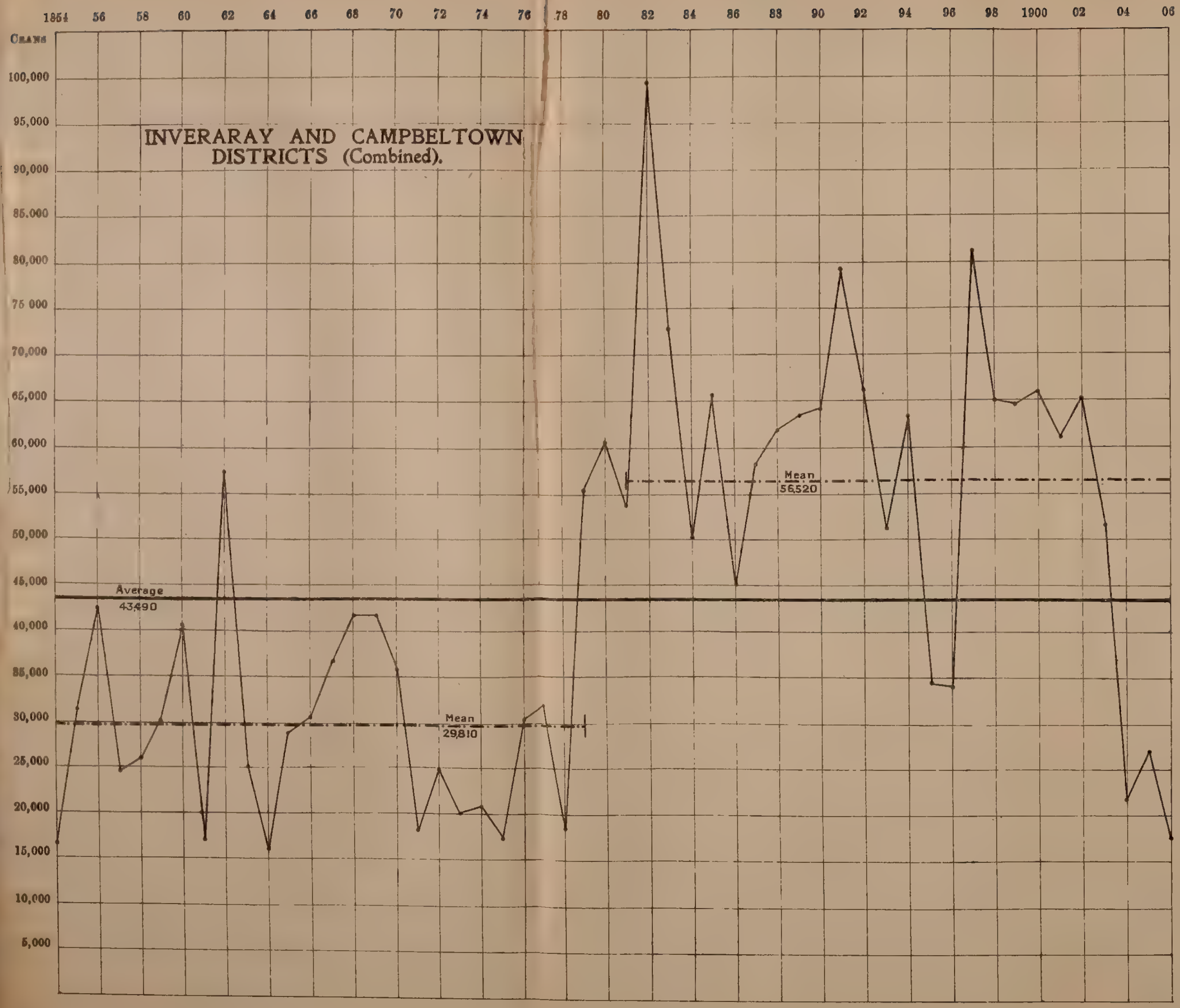
Mean
10,390
Average
9,061
Mean
7,732


INVERARAY AND CAMPBELTOWN DISTRICTS (Combined).

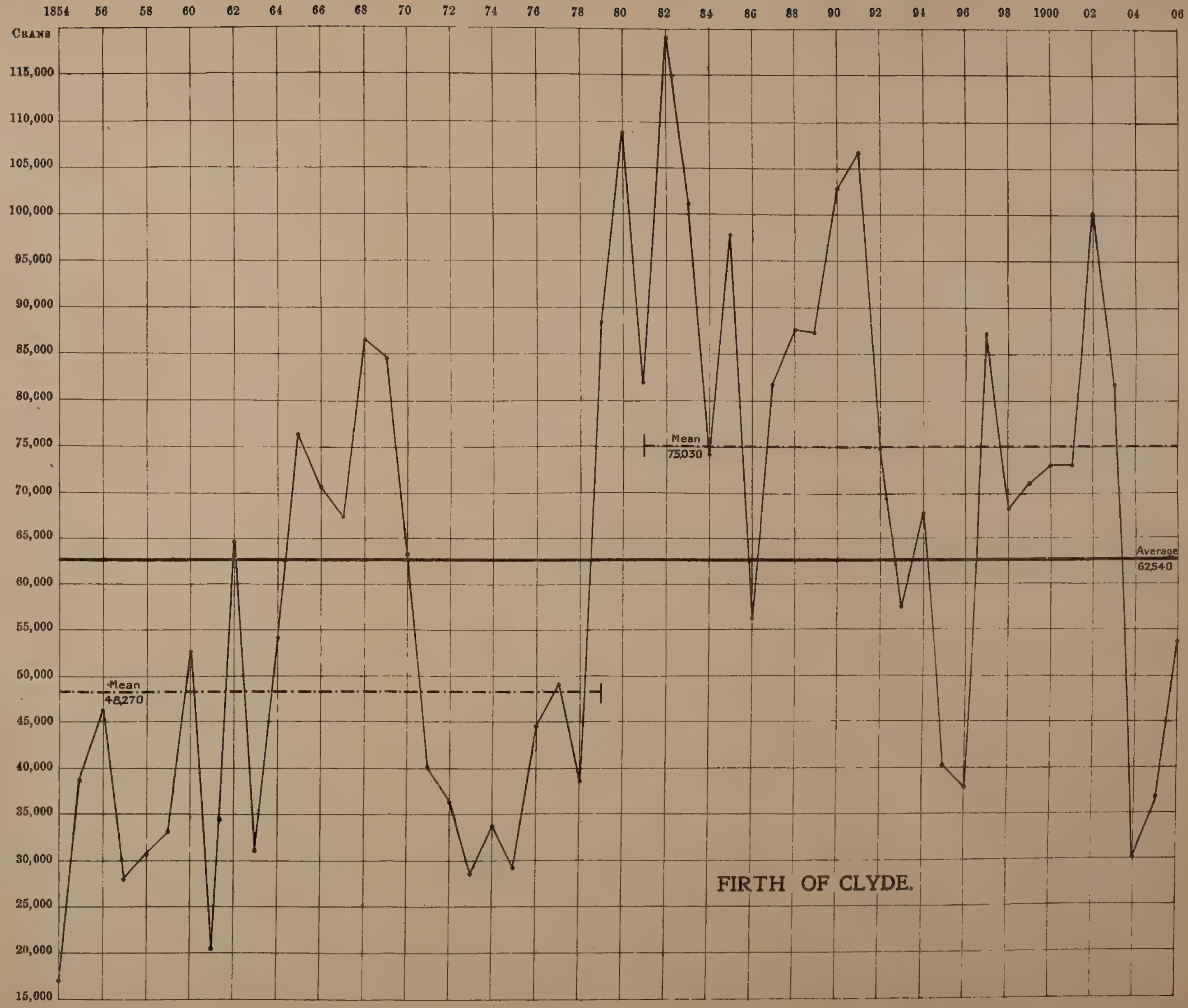

FIRTH OF CLYDE.

PLATE V

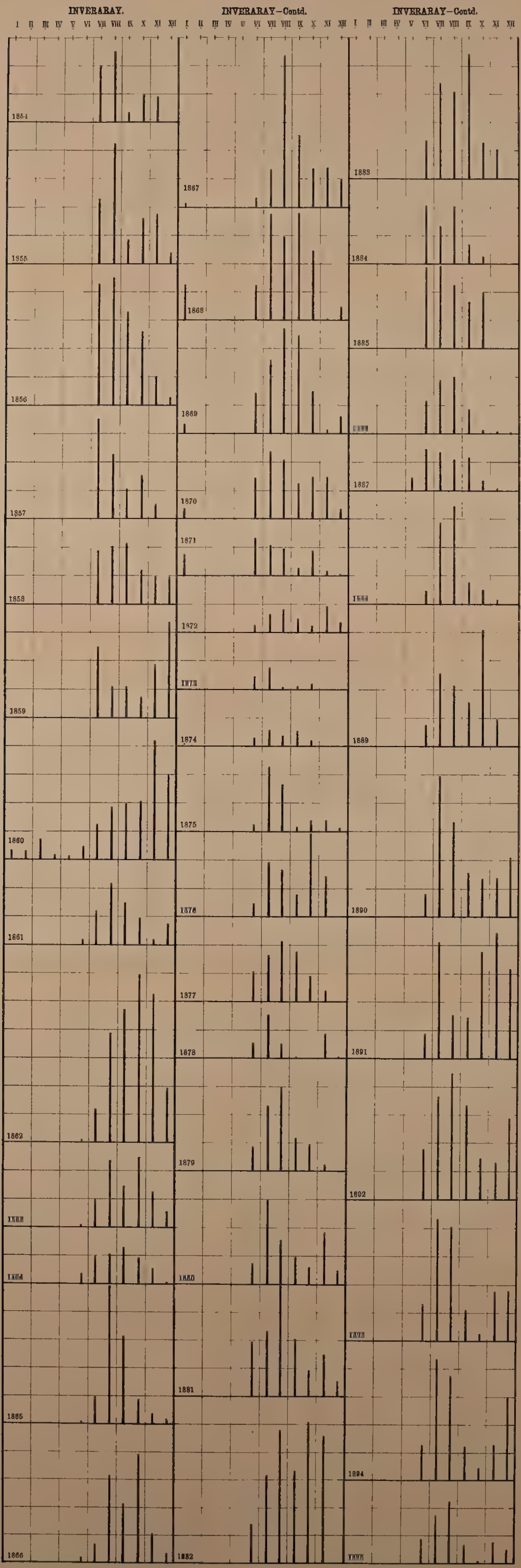

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PLATE VI

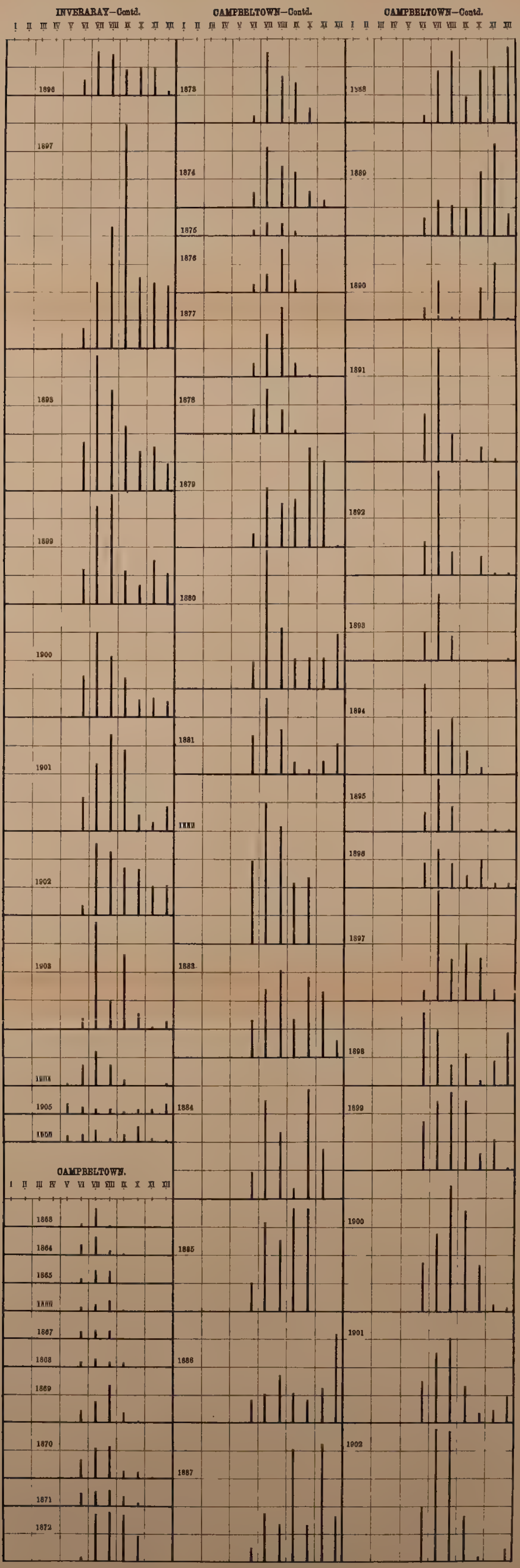
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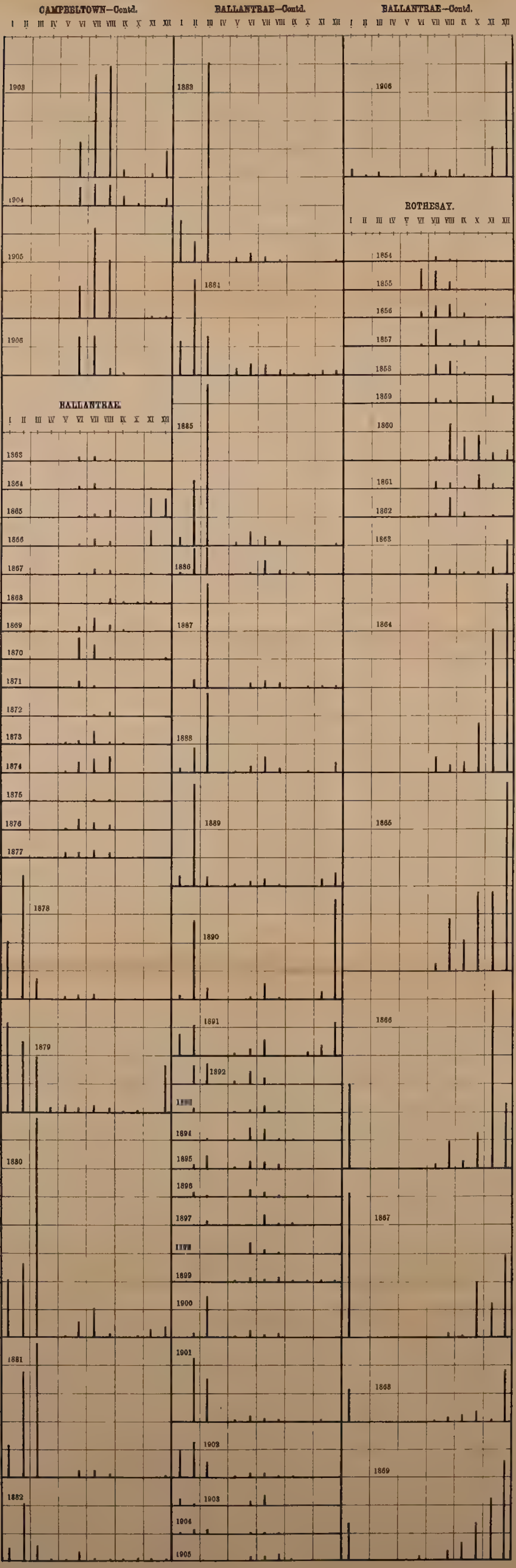
PLATE VII



CAMPBELTOWN—Contd.
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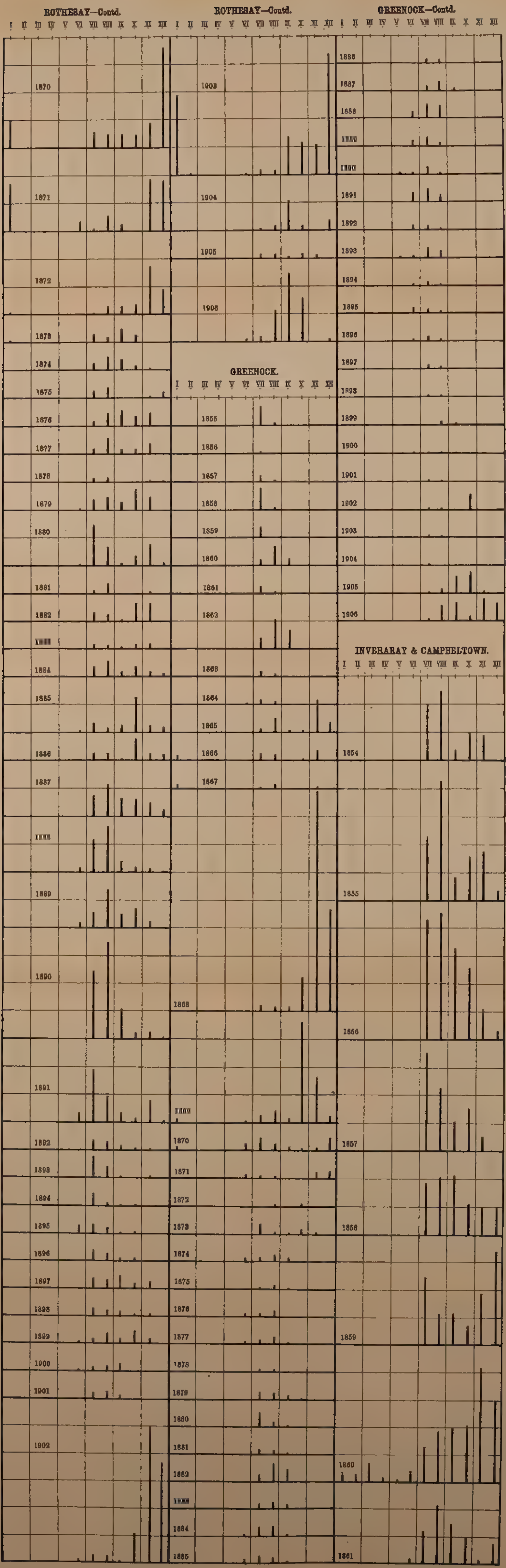
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INVERARAY & CAMPBELTOWN.
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PLATE II

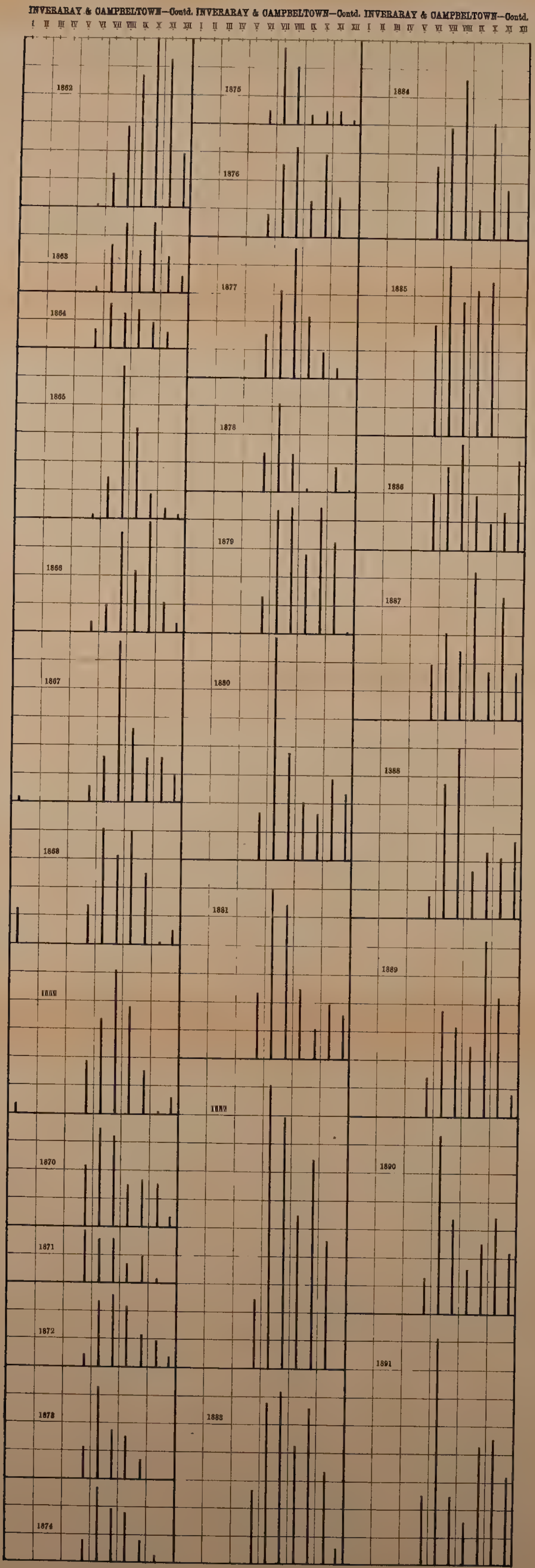
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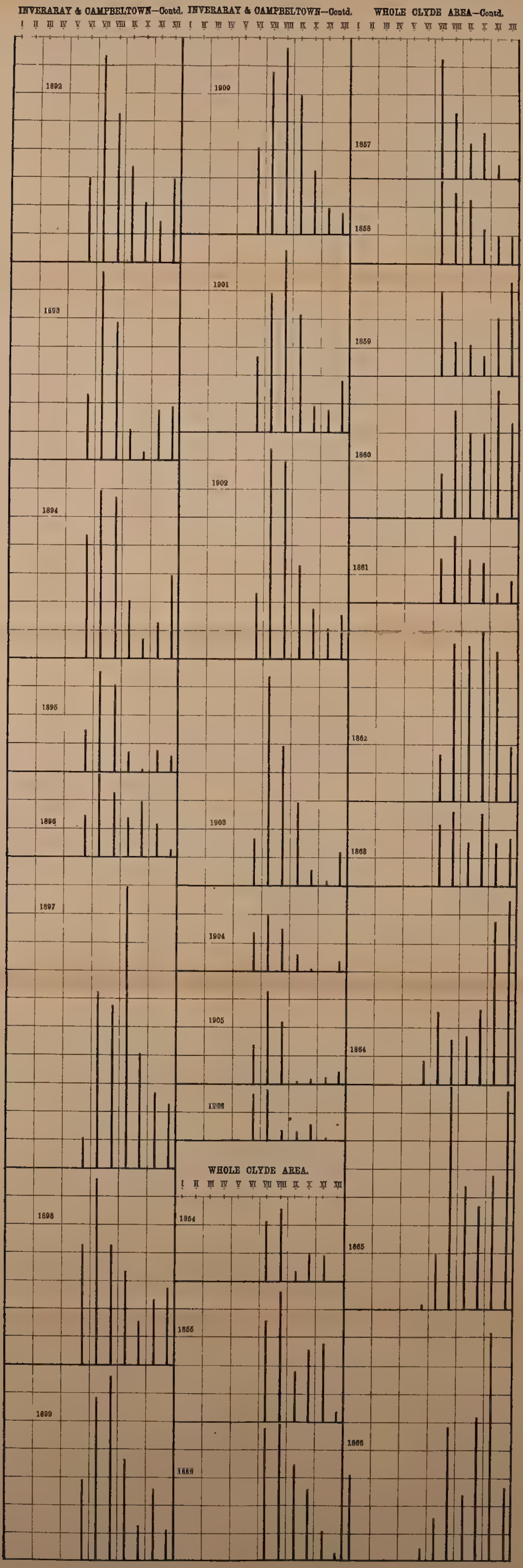
PLATE X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WHOLE CLYDE AREA—Contd.
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WHOLE CLYDE AREA.
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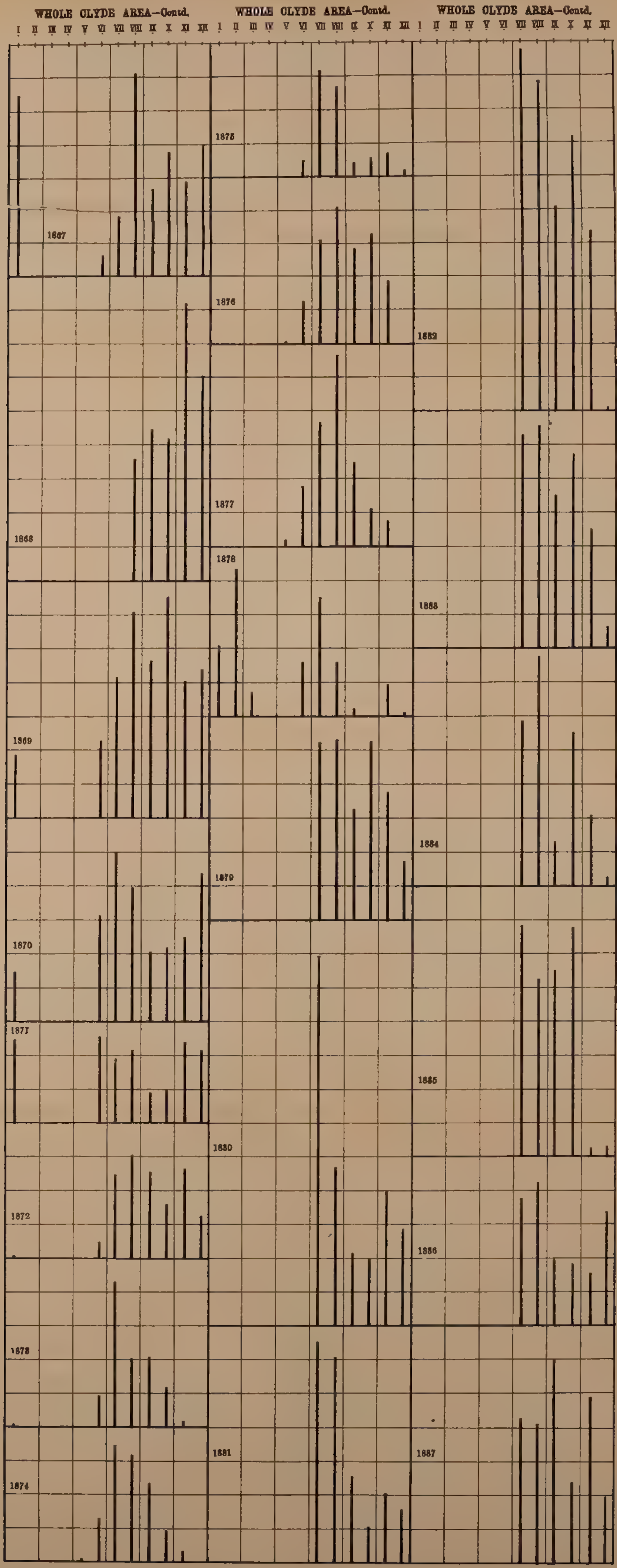
PLATE XI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WHOLE CLYDE AREA—Contd.
WHOLE CLYDE AREA—Contd.
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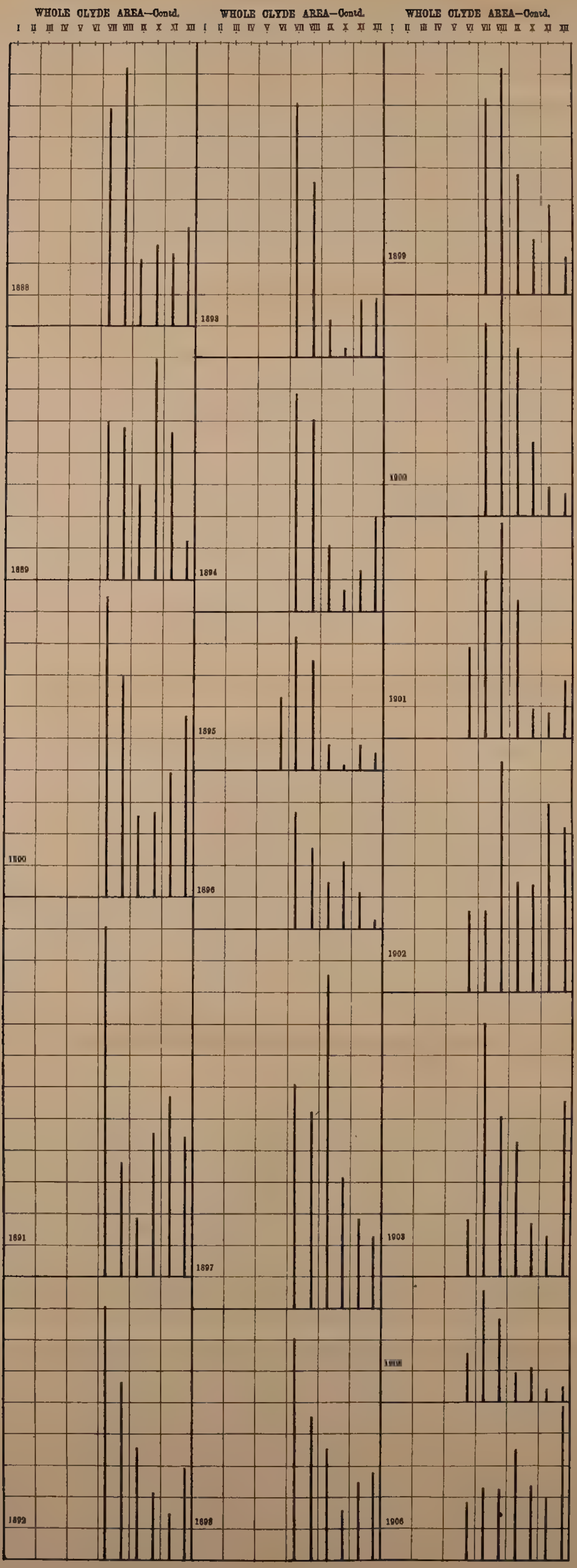
1887

PLATE III


WHOLE CLYDE AREA—Contd.
WHOLE CLYDE AREA—Contd.
WHOLE CLYDE AREA—Contd.
I II III IV V VI VII VIII IX X XI XII
1888
1889
1890
1891
1892
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1900
1901
1902
1903
1905

an opportunity for the examination of the question, a table has been prepared (p. 190) in which are shown the catches in the weeks in which the new moon appeared and in the weeks in which there was a full moon, for the years 1860–1900, for the Inveraray district. It appears from the table that on many occasions the catches in the week of full moon were greater than in the following or preceding week in which the moon was new, but it is evident that the opposite was the rule, since the aggregate quantity taken in the weeks of full moon amounted to 215,152 crans, while in the weeks of new moon the aggregate quantity was 293,035 crans. Some are of opinion that the tides really influence the catch of herrings, but a more obvious circumstance is that moonlight renders the nets more visible, and this is especially so with the seine-net, so that quantities of herrings escape capture. It sometimes happens, indeed, that on clear moonlight nights the seine-fishers refrain from shooting their nets or even from going to sea, a fact which has no doubt an important bearing on the figures above quoted.

EXPLANATION OF PLATES.

Plate I.—Chart of the Clyde area, showing the localities referred to in the various districts.

Plates II.–IV.—Diagrams showing the annual fluctuations in the catch of herrings in the various districts, and in the Clyde as a whole, with the mean catch for periods.

Plates V.–XII.—Diagrams showing, on the same scale throughout, the monthly quantities of herrings taken in each year in the various districts, and in the Clyde as a whole.

TABLE

Showing the total Number of Vessels, including their repeated Voyages, entered Inwards
the Number of Barrels of Herrings Cured on Shore, and the Total

Year.	AYR, IRVINE, AND SALTCOATS.				CAMPBELTOWN.				GLASGOW.				GREENOCK, ETC.			
	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.
	No.	Barrels Cured.			No.	Barrels Cured.			No.	Barrels Cured.			No.	Barrels Cured.		
1809	...	...	...	...	26	3997	14½	4011½	24	2071½	...	2071½	130	23304	67½	23371½
1810	...	...	...	...	36	5581	55	5636	57	4490¼	...	4490¼	142	29605¾	...	29605¾
1	30	4374¾	...	4374¾	29	6033½	32	6065½	70	5320¾	...	5320¾	136	33150	...	33150
2	43	5857½	...	5857½	41	6186	148	6334	136	9992½	...	9992½	150	32243½	...	32243½
3	44	2373	...	2373	40	688½	82	770½	109	5558	...	5558	162	14333½	...	14333½
4	48	3242½	72½	3315	58	3964¾	292	4256¾	143	9487	...	9487	174	23603½	...	23603½
5	42	2676	56	2732	38	3538	530	4068	125	10267½	..	10267½	157	24275½	173	24448½
6	25	1968½	19	1987½	45	3673	1849	5522	123	12262	...	12262	163	19263	560	19823
7	39	3128½	...	3128½	69	4767½	1262	6029½	192	17393	24½	17417½	179	23347	655½	24002½
8	42	3274¼	103½	3378	59	46 1	786½	5447½	194	17712½	4½	17717	206	25085	104½	25189½
9	50	3496½	37½	3534	48	3739½	1229	4968½	130	9429	24	9453	161	24441	75½	24516½
1820	31	2716½	837	3553½	42	4088½	3588	7676½	142	11235	55	11290	161	26598	725½	27323½
1	43	2236	394½	2630½	50*	2501	1544½	4045½	133	7584½	83½	7668	158	15740½	1075	16815½
2	31	1110	114	1224	40	3371	928	4299	98	5082	54	5136	105	8252	17	8269
3	32	2606	74	2680	31	2615½	1345	3960½	112	6647½	42½	6690	109	12697	154	12851
4	29	2287	...	2287	37	2870	3661	6531	131	9446	152	9598	114	17583½	43½	17627
5	33	1508	...	1508	21	1199	45	1244	99	8657½	8	8665½	83	9980½	...	9980½
6	31	2091½	...	2091½	24	1479	293	1772	121	11651	53	11704	114	11015	...	11015
7	29	2672½	74	2746½	20	1557	369	1926	107	9747½	59	9806½	96	11104	...	11104
8	14	2334½	...	2334½	14	1866½	84	1950½	86	11284½	...	11284½	88	12478½	...	12478½
9	18	3045	...	3045	16	2999½	...	2999½	78	11224	...	11224	86	15072½	...	15072½
1830	11	2723	56	2779	17	1521	621	2142	76	12332	...	12332	90	11722	...	11722
1	15	3434½	...	3434½	17	3582	161	3743	66	8975½	...	8975½	77	13191½	...	13191½
2	23	4653	...	4653	33	4909½	682½	5592	101	12799½	7	12806½	94	16662	...	16662
3	15	3158	...	3158	15	3099½	295	3394½	63	8822½	124	8946½	95	12817½	...	12817½
4	...	...	...	...	13	1844½	205½	2050	45	8109½	...	8109½	73†	10522	75	10597
5	...	...	...	...	9	1163½	282½	1446	39	9404½	...	9404½	61	10092½	...	10092½
6	...	...	...	...	7	1015½	2591	3606½	42	10581	...	10581	75	12294½	...	12294½
7	...	...	...	...	15	1871	2093	3964	49	15045½	...	15045½	77	15281	...	15281
8	...	...	...	...	3	480	2563	3043	32	11689	...	11689	75	16177	210	16387
9	...	...	...	...	...	...	1511	1511	24	8640½	...	8640½	65	17409½	8½	17418
1840	...	...	...	...	3	253	4259	4512	77	18322½	...	18322½	122	28904	260	29164
1	...	...	...	...	2	165	1897	2062	68	18094½	...	18094½	124	28494	150	28644
2	...	...	...	...	...	...	1285	1285	98	17893	...	17893	97	20609	110	20719
3	...	...	...	...	2	254	3482	3736	88	20596	...	20596	85	21412½	1472	22884½
‡4	...	...	...	...	3	120	1164	1284	43	14196	...	14196	79	15312	732	16044
5	...	...	...	...	14	406	773	1179	44	14470	...	14470	82	16892½	1120	18012½
6	...	...	...	...	5	343	4257	4600	44	15530	...	15530	64	16264½	1365	17629½
7	...	...	...	...	3	298	3703	4001	34	9977	...	9977	46	12428½	3120	15548½
8	...	...	...	...	9	230	2853	3083	44	15454	...	15454	45	11900	482	12382
9	...	...	...	...	6	511	4797	5308	64	15957	...	15957	80	22282½	223	22505½
1850	...	...	...	...	...	...	...	...	34	10362½	...	10362½	57	12298	2000	14298
1	...	...	...	...	...	...	...	...	81	20420	...	20420	65	10409	4093	14502
2	...	...	...	...	...	...	...	...	58	15306	...	15306	73	8859	1786½	10645½
3	...	...	...	...	...	...	...	...	71	25784½	...	25784½	76	13455	339½	13794½
4	...	...	...	...	...	...	...	...	26	12410	...	12410	65	7294	1162	8456
5	...	...	...	...	...	...	...	...	36	18785	23	18808	70	10188½	951	11139½
6	...	...	...	...	...	...	...	...	49	19075	...	19075	55	5666½	929	6595½
7	...	...	...	...	...	...	...	...	17	2354½	...	2354½	47	6349	349	6698
8	...	...	...	...	...	...	...	...	14	3366	...	3366	45	9781	1005	10786
9	...	...	...	...	...	...	...	...	12	18555	...	18555	43	6788	1102	7890

* Now includes Islay. † Now includes Ayr, Irvine, &c. ‡ From 5th April 1844 to 5th Jan. 1845.
§ Year now ends 31st December.

NOTE.—From 1809 to 1843 the year ended on 5th April; in 1844, only nine months are included, viz., from 5th

I.

from the Fishery, with the Number of Barrels of Herrings Cured on Board ; also, Number Cured, in the Firth of Clyde Districts, in each year 1809-1906.

Year.	INVERARAY.				ROTHESAY.				STRANRAER AND DUMFRIES.				TOTAL.			
	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.
	No.	Barrels Cured.			No.	Barrels Cured.			No.	Barrels Cured.			No.	Barrels Cured.		
1809	10	396½	1688	2084½	122	14245	145	14390	...	...	...	...	312	44014	1915	45929
1810	15	1712	3058	4770	132	23043	33	23076	...	...	...	...	382	64432	3146	67578
1	23	2334	3233½	5567½	89	20904½	...	20904½	...	...	...	...	377	72117½	3265½	75383
2	12	1286½	4012¾	5299¼	113	26392	...	26392	...	...	...	...	495	81958	4160¾	86118¾
3	24	1284	4212½	5496½	136	7092	347	7439	9	932	694½	1626½	524	32261	5336	37597
4	42	2680	6160	8840	123	16030¼	617½	16647¾	12	851	2513	3364	600	59859	9655	69514
5	38	29772½	9057	12034½	86	9170	558	9728	8	482	1566	2048	494	53386½	11940	65326½
6	34	3014½	3928	6942½	73	7474	323	7797	7	416	2212½	2628½	470	48071	8891½	56962½
7	28	2109½	4268½	6378	109	13767	674½	14441½	13	938	932	1870	629	65450½	7817	73267½
8	25	1794	3920	5714	91	9675½	910½	10586	17	1496	268½	1764½	634	63698½	6097½	69796
9	23	2491½	4274½	6766	69	12290½	470½	12761	18	1656½	171½	1828	498	57544½	6282½	63827
1820	26	4311	2328	6639	90	16368	2397	18765	23	2842½	491	3333½	515	68159½	10421½	78581
1	20	3632	1467	5099	81	10629	1204	11833	30*	734	182	916	515	43057	5950½	49007½
2	10	761	1302½	2063½	56	7006	1064	8070	28	725½	257	982½	368	26307½	3736½	30044
3	14	1180	1225½	2405½	57	9771	2035	11806	29	3411	2380	5791	384	38928	7256	46184
4	9	1691	998	2689	61	14837½	352	15189½	19	2340	32½	2372½	400	51055	5239	56294
5	13	381½	1331	1712½	50	12280	100	12380	11	1203	...	1203	310	35209½	1484	36693½
6	9	965	2304½	3269½	63	9050½	229½	9280	10	1128½	159	1287½	372	37380½	3039	40419½
7	6	653½	1819	2472½	42	11530	207	11737	14	1807½	472	2279½	314	39072	3000	42072
8	5	659	1248	1907	44	12234½	...	12234½	10	1311	168	1479	261	42168½	1500	43668½
9	10	1959	1555½	3514½	51	16399	...	16399	12	1998	80	2078	271	52697	1635½	54332½
1830	7	816½	1453	2269½	41	9698½	...	9698½	9	1820	854	2674	251	40633	2984	43617
1	5	625	1635	2260	36	9134	...	9134	10	2178½	...	2178½	226	41121	1796	42917
2	9	1190	3708	4898	54	19943	30	19973	12	3219	...	3219	326	63376	4427½	67803½
3	6	959½	3627½	4587	52	20482½	79	20561½	15	3343	...	3343	261	52682½	4125½	56808
4	7	1128½	2632½	3761	40	15316	105	15421	17	3261½	...	3261½	195	40182	3018	43200
5	3	683	2307	2990	41	16881	2550	19431	8	1910	...	1910	161	40134½	5139½	45274
6	4	676	3658½	4334½	40	15826	3265	19091	9	1769½	...	1769½	177	42162½	9514½	51677
7	2	354	7444½	7798½	50	19942	...	19942	7	1564	...	1564	200	54057½	9537½	63595
8	3	863½	7040½	7904	43	20145	2802½	22947½	11	2562	...	2562	167	51916½	12616	64532½
9	1	303	2922	3225	33	17119	...	17119	6	1665	...	1665	129	45137	4441½	49578½
1840	9	3539	4022½	7561½	46	18401	...	18401	11	3075	...	3075	268	72494½	8541½	81036
1	9	1928	6370½	8298½	40	14843½	...	14843½	8	2415	...	2415	251	65940	8417½	74357½
2	6	2957	3531½	6488½	31	10127	234	10361	9	2476	...	2476	241	54062	5160½	59222½
3	9	4845½	4036½	8882	31	11678	309	11987	7	2084	...	2084	222	60870	9299½	70169½
4	9	4415½	4588½	9004	33	9699	110	9809	12	2764	...	2764	179	46506½	6594½	53101
5	11	4782½	4201	8983½	36	9109	454	9563	14	2965	835	3800	201	48625	7383	56008
6	10	3436	6567½	10003½	25	5845	289	6134	13	3294	1152	4446	161	44712½	13630½	58343
7	9	2666	5191	7857	23	4646	244	4890	8	1884	671	2555	123	31899½	12929	44828½
8	7	1783½	4244½	6028	20	3228½	...	3228½	9	1813½	1530½	3344	134	34409½	9110	43519½
9	8	1624½	13985	15609½	44	9496½	...	9496½	7	1933	1275	3208	209	51804½	20280	72084½
1850	†17	1473½	16149½	17623	26	6047½	...	6047½	...	...	...	...	134	30181½	18149½	48331
1	36	8697	26628	35325	27	4364	949	5313	...	...	...	...	209	43890	31670	75560
2	20	450½	11804	12254½	11	847	1370	2217	...	...	...	...	162	25462½	14960½	40423
3	38	1864½	21874½	23739	24	2226½	3828	6054½	...	...	...	...	209	43330½	26042	69372½
4	44	1579½	19053	20632½	26	1412	987½	2399½	...	...	...	...	161	22695½	21202½	43898
5	30	2238	26558½	28796½	29	1574	3500	5074	...	...	...	...	165	32785½	31032½	63818
6	45	4201	31005½	35206½	27	1940	2433	4373	...	...	...	...	176	30882½	34367½	65250
7	45	8020	21132	29152	25	2629½	2506	5135½	...	...	...	...	134	19353	23987	43340
8	45	9155	22398	31553	20	3386½	1885	5271½	...	...	...	...	124	25688½	25288	50976½
9	41	2688	26062	28750	23	1654	2193	3847	...	...	...	...	119	29685	29357	59042

* Now includes Dumfries. † Now includes Campbeltown.

April to 5th January 1845 ; from 1845 to 1851 the year ended on 5th Jan., and from 1852 it ended on 31st Dec.

TABLE I.—

Showing the total Number of Vessels, including their repeated Voyages, entered Inwards from the
Herrings Cured on Shore, and the Total Number Cured,

Year.	AYR, IRVINE, AND SALTCOATS.				CAMPBELTOWN.				GLASGOW.				GREENOCK, ETC.			
	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.
	No.	Barrels Cured.			No.	Barrels Cured.			No.	Barrels Cured.			No.	Barrels Cured.		
1860	...	...	...	...	...	...	...	...	11	13461	...	13461	47	6312½	1615	7927½
1	...	...	...	...	...	...	...	...	5	10849	...	10849	34	4212	227	4439
2	...	...	...	...	...	...	...	...	14	20287	...	20287	49	11387½	562	11949½
3	...	...	...	...	6	188	1991	2179	4	8140	96½	8236½	19	2754	127	2881
4	...	...	...	...	11	624	2650½	3274½	9	10601	...	10601	26	4081	171	4252
5	...	...	...	...	19	455	2257	2712	6	14795	...	14795	36	4120½	981	5101½
6	...	...	...	...	13	636	1763½	2399½	9	12523	120	12643	47	5497½	789	6286½
7	...	...	...	...	14	1270	2450	3720	9	12627	8079	20706	30	5135	...	5135
8	...	...	...	...	6	319	1412½	1731½	9	12464	28300	40764	18	5587	33834	39421
9	...	...	...	...	9	398	5545	5943	6	14590	9500	24090	8	9103½	22681	31784½
1870	...	...	...	...	2	103	6293	6396	...	7168	236	7404	10	6812½	3401	10213½
1	...	...	...	...	1	...	5711	5711	...	7487	235	7722	8	9056½	3140	12196½
2	...	...	...	...	3	184	6352	6536	...	2108	...	2108	7	1607	256	1863
3	...	...	...	...	4	125	16488	16613	...	2410	...	2410	5	1124	756	1880
4	...	...	...	...	4	141	18571	18712	...	2898	...	2898	4	1459	844	2303
5	...	...	...	...	9	147	6280	6427	...	...	...	...	6	3242	919	4161
6	...	...	...	...	1	12	11399	11411	...	...	...	...	4	1880	1814	3694
7	...	...	...	...	2	78	18220	18298	...	...	...	...	6	2132½	1527	3659½
8	...	...	...	...	4	217	18187	18404	...	...	...	...	4	3838½	683	4521½
9	...	...	...	...	5	158	36789½	36947½	...	...	...	...	10	4279½	1816	6095½
1880	...	...	...	...	7	438	44350	44788	...	...	...	...	5	7439	2418	9857
1	...	...	...	...	4	81	23862	23943	...	...	...	...	5	8655	1248	9903
2	...	...	...	...	2	264	53241	53505	...	...	...	...	8	16050	3949	19999
3	...	...	...	...	...	...	49089	49089	...	...	...	...	6	3649½	2314	5963½
4	...	...	...	...	1	32	40921	40953	...	...	...	...	3	12007½	3909½	15917
5	...	...	...	...	...	...	44791	44791	...	...	...	...	4	7893	8443	16336
6	...	...	...	...	1	555	41637	42192	...	...	...	...	3	2026	...	2026
7	...	...	...	...	2	719	56678	57397	...	...	...	...	2	3619	...	3619
8	...	...	...	...	...	...	49232	49232	...	...	...	...	2	9504	...	9504
9	...	...	...	...	1	4299	45883	50182	...	...	...	...	4	13267	...	13267
1890	...	...	...	...	2	5759	4770	10529	...	...	...	...	2	11165	...	11165
1	...	...	...	...	1	6037	16439	22476	...	...	...	...	2	22458	...	22458
2	...	...	...	...	...	...	10946	10946	...	...	...	...	2	...	...	...
3	...	...	...	...	...	84	14363	14447	...	...	...	...	2	...	...	...
4	...	...	...	...	...	923	16439	17362	...	...	...	...	...	...	...	...
5	...	...	...	...	...	...	1202	1202	...	...	...	...	...	...	...	...
6	...	...	...	...	...	...	328	328	...	...	...	...	8	...	11367	11367
7	...	...	...	...	1	80	555	635	...	...	...	...	6	...	21583	21583
8	...	...	...	...	...	...	351	351	...	...	...	...	6	...	17401	17401
9	...	...	...	...	...	...	1300	1300	...	...	...	...	7	...	26896	26896
1900	...	...	...	...	1	...	1014	1014	...	...	...	...	4	...	25350	25350
1	...	...	...	...	...	69	838	907	...	...	...	...	4	...	26287	26287
2	...	...	...	...	...	...	392	392	...	...	...	...	2	...	30858	30858
3	...	...	...	...	...	...	1163	1163	...	...	...	...	2	...	28837	28837
4	...	...	...	...	...	...	116	116	...	...	...	...	...	...	20199	20199
5	...	...	...	...	...	...	607	607	...	...	...	...	...	...	27322	27322
6	...	...	...	...	...	...	300	300	...	...	...	...	...	...	23511	23511

continued.

Fishery, with the Number of Barrels of Herrings Cured on Board ; also, the Number of Barrels of
in the Firth of Clyde Districts, in each year 1809-1906.

Year.	INVERARAY.				ROTHESAY.				STRANRAER AND DUMFRIES.				TOTAL.			
	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.	Vessels.		Barrels Cured on Shore.	Total Barrels Cured.
	No.	Barrels Cured.			No.	Barrels Cured.			No.	Barrels Cured.			No.	Barrels Cured.		
1860	50	3225	29532	32757	26	698½	6721	7419½	...	...	...	...	134	23697	37868	61565
1	51	3702½	19104½	22807	9	931	1517	2448	...	...	...	...	99	19694½	20848½	40543
2	68	8446	46715	55161	15	1513½	2512	4025½	...	...	...	...	146	41634	49789	91423
3	*37	1089	18350½	19439½	14	3079½	1832	4911½	14	1341	...	1341	94	16591½	22397	38988½
4	36	2212	13593	15805	23	4878	22263½	27141½	13	2195	...	2195	118	24591	38678	63269
5	34	412	23784½	24196½	30	918½	25260	26178½	14	1914	1015	2929	139	22615	53297½	75912½
6	58	2796	24720	27516	34	3434	28757	32191	21	1579	382	1961	182	26465½	56531½	82997
7	58	3563	33134	36697	21	4313	24200	28513	14	2222	...	2222	146	29130	67863	96993
8	33	1659	41697	43356	17	2357½	8712	11069½	19	1711	...	1711	102	24097½	113955½	138053
9	41	8376	30838	39214	17	1466	15230	16696	19	1368	...	1368	100	35301½	83794	119095½
1870	29	1444	20066	21510	13	1308	16996	18304	11	1003	27	1030	65	17838½	47019	64857½
1	42	18056	11396	29452	10	874	8890	9764	12	1146	...	1146	73	36619½	29372	65991½
2	22	2445	7940	10385	6	493	10746	11239	8	277	...	277	46	7114	25294	32408
3	22	4487	5785½	10272½	8	576	3388	3964	8	687	...	687	47	9409	26417½	35826½
4	25	1307	5828½	7135½	10	985	2842	3827	11	278	451	729	54	7068	28536½	35604½
5	22	1098	13257	14355	15	673	3757	4430	5	929	9647	10576	57	6089	33860	39949
6	16	17058½	14125	31183½	15	486	5810	6296	4	490	6071	6561	40	19926½	39219	59145½
7	28	14119	9213½	23332½	9	315	3168	3483	6	433	10254	10687	51	17077½	42382½	59460
8	44	3655	10145½	13800½	12	692	1637	2329	3	350	17493	17843	67	8752½	48145½	56898
9	26	15900½	17936½	33837	10	189	7243	7432	3	128	25300	25428	54	20655	89085	109740
1880	21	23439	6754	30193	13	548	10137	10685	1	114	31292	31406	47	31978	94951	126929
1	24	25445	14574	40019	6	1063	3403	4466	...	...	17390	17390	39	35244	60477	95721
2	32	29495	55359	84854	9	1009	10107	11116	...	...	13401	13401	51	46818	136057	182875
3	13	32888	18606	51494	6	265	3069	3334	...	...	26501	26501	22	45160½	101174½	146335
4	15	11404	10111	21515	12	687	3640	4327	...	...	14019	14019	31	24130½	72600½	96731
5	7	11129	15250	26379	6	503	2962	3465	...	...	27671	27671	17	19525	99117	118642
6	2	314	18091	18405	1	11	2039	2050	...	...	4760	4760	7	2906	66527	69433
7	1	10	15808	15818	3	129	1795	1924	...	...	9881	9881	8	4477	84162	88639
8	3	364	20794	21158	3	121	1179	1300	...	...	9696	9696	8	9989	80901	90890
9	...	...	30702	30702	5	600	594	1194	...	...	7788	7788	10	18166	84967	103133
1890	...	...	1060	1060	7	719	621	1340	...	...	1322	1322	9	6478	7773	14251
1	...	...	1763	1763	4	505	962	1467	...	...	490	490	7	29000	19654	48654
2	...	...	1166	1166	4	...	550	550	...	...	140	140	8	...	12802	12802
3	...	8	1441	1449	3	...	345	345	...	...	...	...	5	92	16149	16241
4	...	31	1763	1794	...	...	962	962	...	...	490	490	...	954	19654	20608
5	...	...	116	116	...	...	165	165	...	...	...	...	...	...	1483	1483
6	...	...	244	244	4	...	399	399	...	...	...	...	12	...	12338	12338
7	...	2709	9423	12132	3	308	646	954	...	...	...	...	10	3097	32207	35304
8	...	2015	1197	3212	...	...	...	...	...	...	...	...	...	2015	18949	20964
9	...	38	886	924	2	553	1204	1757	...	...	...	...	2	591	30286	30877
1900	...	...	1876	1876	2	508	582	1090	...	...	80	80	7	508	28902	29410
1	...	14	1292	1306	2	291	643	934	...	...	135	135	6	374	29195	29569
2	...	...	3110	3110	...	240	2865	3105	...	...	135	135	2	240	37360	37600
3	...	...	3185	3185	3	154	1502	1656	...	...	95	95	5	154	34782	34936
4	...	...	184	184	...	...	505	505	...	...	27	27	...	...	21031	21031
5	...	...	318	318	...	...	182	182	...	...	108	108	...	...	28537	28537
6	...	...	2335	2335	...	...	773	773	...	...	57	57	...	...	26976	26976

* Now excludes Campbeltown.

TABLE

Showing the Number of Boats, whether decked or undecked, employed in the Firth of Clyde and Boys by whom the said Boats were manned, together with the Number of

Year.	Ayr, Irvine, and Saltcoats.				Campbeltown.				Glasgow.				Greenock.			
	Number of			Total Persons Employed.	Number of			Total Persons Employed.	Number of			Total Persons Employed.	Number of			Total Persons Employed.
	Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Curers. Fish		Boats.	Men and Boys.	Fish Curers.	
1825	82	275	34	509	190	593	37	917	...	...	4	96	300	900	20	2070
6	99	441	36	619	187	578	52	936	...	...	4	112	285	855	17	2021
7	138	545	32	744	216	607	57	976	...	...	3	121	264	792	21	2000
8	138	545	32	748	212	610	67	952	...	...	4	137	250	750	21	1992
9	126	472	29	684	226	666	73	1020	...	...	4	156	245	725	19	1856
1830	125	464	30	679	261	771	71	1181	...	...	3	155	240	710	25	1781
1	90	331	24	502	265	878	71	1204	...	...	3	159	240	720	27	1793
2	92	341	28	509	272	1015	70	1239	...	...	5	150	247	741	26	1828
3	88	324	25	522	339	1166	86	1445	...	...	5	158	264	792	25	1847
4	...	...	...	...	387	1199	78	1457	...	...	4	137	352	1116	50	2369
5	...	...	...	...	379	1240	87	1502	...	...	4	132	365	1144	44	2349
6	...	...	...	...	400	1231	113	1587	...	...	5	135	387	1199	41	2465
7	...	...	...	...	392	1214	77	1448	...	...	6	152	375	1110	36	2374
8	...	...	...	...	410	1271	66	1503	...	...	5	152	370	1076	25	2138
9	...	...	...	...	505	1599	62	1839	...	...	5	139	383	1110	31	2299
1840	...	...	...	...	517	1643	76	1919	...	...	6	154	455	1291	38	2892
1	...	...	...	...	518	1642	59	1899	...	...	7	161	504	1437	48	3203
2	...	...	...	...	422	1558	48	2028	...	...	7	160	489	1209	32	2506
3	...	...	...	...	462	1687	81	2601	...	...	7	163	518	1280	46	2401
4	...	...	...	...	468	1658	75	2510	...	...	9	164	471	1194	43	2048
5	...	...	...	...	583	1806	75	2671	...	...	7	167	476	1183	45	1972
6	...	...	...	...	588	1836	135	2778	...	...	8	155	491	1170	38	2033
7	...	...	...	...	589	1890	121	2772	...	...	10	147	493	1172	30	1982
8	...	...	...	...	546	1930	129	2644	...	...	9	137	478	1200	35	1829
9	...	...	...	...	517	1806	111	2391	...	...	9	142	496	1302	34	1984
1850	...	...	...	...	...	...	...	...	48	97	13	261	539	1603	26	2422
1	...	...	...	...	...	...	...	...	45	88	16	251	592	1827	32	2463
2	...	...	...	...	...	...	...	...	45	88	18	239	603	1893	29	2517
3	...	...	...	...	...	...	...	...	47	92	19	255	587	1883	34	2537
4	...	...	...	...	...	...	...	...	41	82	20	244	591	1828	33	2530
5	...	...	...	...	...	...	...	...	35	78	19	593	581	1608	31	2965
6	...	...	...	...	...	...	...	...	28	60	21	577	585	1545	32	2711
7	...	...	...	...	...	...	...	...	26	60	20	576	562	1413	31	2529
8	...	...	...	...	...	...	...	...	23	60	20	?	551	1276	34	?
9	...	...	...	...	...	...	...	...	21	52	20	...	542	1212	32	...
1860	...	...	...	...	...	...	...	...	21	39	20	...	506	1099	36	...
1	...	...	...	...	...	...	...	...	21	39	20	...	510	1097	32	...
2	...	...	...	...	...	...	...	...	21	40	20	...	498	1082	42	...
3	...	...	...	...	370	1112	36	...	21	39	20	...	188	425	17	...
4	...	...	...	...	412	1187	36	...	29	69	27	...	186	427	20	...
5	...	...	...	...	407	1140	46	...	37	107	27	...	191	475	25	...
6	...	...	...	...	433	1229	47	...	32	110	27	...	189	469	30	...
7	...	...	...	...	455	1278	48	...	30	100	29	...	192	469	26	...
8	...	...	...	...	448	1214	45	...	32	100	29	...	188	525	18	...
9	...	...	...	...	453	1123	48	...	110	280	29	...	421	935	22	...

* The total includes the fishermen and fish-curers, and also the following:—(1) The number of coopers; number of labourers. After 1893 it includes also fishmongers, hawkers of fish, clerks, persons gathering persons employed on board vessels, curing, exporting, and carrying herrings and other fish, or importing

II.

Districts in the Shore-curing Herring and Cod and Ling Fisheries, with the Number of Men Fish-curers, and the Total Number of Persons employed* in each year 1825–1906.

Year.	INVERARAY.				ROTHESAY.				STRANRAER, &c.				TOTALS.			
	Number of			Total Persons Employed.	Number of			Total Persons Employed.	Number of			Total Persons Employed.	Number of			Total Persons Employed.
	Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.	
1825	335	1005	39	1369	246	768	22	1023	143	553	46	673	1296	4094	202	6657
6	346	1038	71	1525	243	758	24	980	152	589	42	701	1424	4515	256	7531
7	367	1101	71	1631	287	861	22	1246	152	609	50	813	1312	4259	246	6894
8	377	1100	73	1536	275	825	17	1195	128	533	51	782	1380	4363	265	7342
9	375	1095	69	1596	273	819	16	1195	132	607	54	872	1377	4384	264	7379
1830	370	1080	67	1579	279	837	15	1202	147	655	56	963	1423	4521	272	7571
1	371	1085	60	1521	276	828	16	1176	92	400	9	509	1334	4242	210	6864
2	403	1203	66	1689	279	837	18	1195	94	402	8	507	1387	4539	221	7117
3	419	1244	61	1770	289	867	15	1219	76	294	11	479	1475	4687	228	7440
4	418	1254	55	1769	301	903	16	1256	74	381	11	542	1532	4853	214	7530
5	425	1275	53	1786	299	897	16	1250	68	302	7	451	1536	4858	211	7470
6	441	1303	30	2057	297	891	17	1244	56	312	7	459	1581	4936	213	7947
7	451	1353	32	2116	300	917	19	1266	79	414	6	564	1597	5008	176	7920
8	454	1362	29	2143	269	808	30	931	78	317	6	391	1581	4834	161	7258
9	454	1362	26	2140	263	786	34	931	84	430	4	508	1689	5287	162	7856
1840	1020	2893	32	4382	269	816	33	946	90	433	7	547	2351	7076	192	10840
1	1028	2917	37	4512	278	845	36	972	88	378	6	491	2416	7219	193	11238
2	1074	3077	53	4720	289	897	36	990	94	436	5	551	2368	7177	181	10955
3	1080	3076	35	4704	278	875	41	1057	191	620	4	881	2529	7538	214	11807
4	1120	3196	36	4825	278	848	35	983	191	620	7	895	2528	7516	205	11425
5	1150	3306	40	4950	281	848	27	1034	205	633	11	941	2695	7776	205	11735
6	1201	3529	41	5293	233	832	27	967	205	633	11	942	2718	8000	260	12168
7	1268	3916	34	5487	232	701	24	826	208	680	6	1009	2790	8359	225	12223
8	1283	4024	38	5634	219	779	18	839	208	680	9	1012	2734	8613	238	12095
9	1283	4024	16	5612	217	814	35	902	219	703	8	1048	2732	8649	213	12079
1850	1445	4689	142	6574	227	855	30	955	...	...	...	...	2259	7244	211	10212
1	1445	4689	142	6574	231	702	31	813	...	...	...	...	2313	7306	221	10101
2	1185	3838	67	5260	495	1616	100	2289	...	...	...	...	2328	7435	214	10305
3	1086	3292	70	4536	567	1727	73	2291	...	...	...	...	2287	6994	196	9619
4	1062	3189	65	4368	561	1624	76	2118	...	...	...	...	2255	6723	194	9260
5	1045	3084	70	4442	557	1654	66	2822	...	...	...	...	2218	6424	186	10822
6	1024	3025	82	4320	534	1613	62	2632	...	...	...	...	2171	6243	197	10240
7	1023	3022	74	4387	554	1684	40	2668	...	...	...	...	2165	6179	165	10160
8	999	2915	74	?	562	1723	36	...	...	...	...	...	2135	5974	164	...
9	1072	2944	105	...	553	1816	43	...	...	...	...	...	2188	6024	200	...
1860	995	2698	80	...	542	1816	29	...	...	...	...	...	2061	5652	165	...
1	1071	2671	84	...	520	1727	32	...	...	...	...	...	2122	5534	168	...
2	1114	2578	111	...	509	1511	28	...	...	...	...	...	2142	5211	201	...
3	1046	2446	73	...	296	794	29	...	308	684	12	...	2229	5500	187	...
4	1135	2648	83	...	293	766	48	...	316	697	13	...	2371	5794	227	...
5	1150	2678	91	...	287	659	49	...	320	710	17	...	2392	5769	255	...
6	1181	2744	107	...	292	668	42	...	337	756	17	...	2464	5976	270	...
7	1273	2801	130	...	357	697	37	...	340	760	18	...	2647	6105	288	...
8	1370	2977	153	...	378	787	31	...	347	773	18	...	2763	6376	294	...
9	872	1915	127	...	478	1073	31	...	351	793	15	...	2685	6119	272	...

(2) the number of persons employed in gutting, packing, re-packing, cleaning, or drying the fish ; (3) the bait and baiting lines, boat-builders, persons making and mending nets, persons manufacturing barrel staves, salt, stave wood, and hoops.

TABLE II.—

Showing the Number of Boats, whether decked or undecked, employed in the Firth of Clyde
and Boys by whom the said Boats were manned, together with the Number of

Year.	AYR, IRVINE, AND SALTCOATS.				CAMPBELTOWN.				GLASGOW.				GREENOCK.			
	Number of			Total Persons Employed.	Number of			Total Persons Employed.	Number of			Total Persons Employed.	Number of			Total Persons Employed.
	Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.	
1870	...	...	...	...	473	1088	41	1565	159	360	29	1166	408	829	16	1311
1	...	...	...	...	481	1098	43	1573	137	342	25	1145	371	705	15	443
2	...	...	...	...	489	1178	42	1646	136	360	24	1158	346	602	11	1054
3	...	...	...	...	497	1187	46	1704	119	305	24	1069	297	514	11	954
4	...	...	...	...	491	1174	46	1679	106	291	24	1077	285	487	12	924
5	...	...	...	...	499	1226	37	1676	...	...	...	...	339	656	38	1709
6	...	...	...	...	499	1312	35	1749	...	...	...	...	308	599	32	1623
7	...	...	...	...	541	1324	35	1805	...	...	...	...	325	580	27	1572
8	...	...	...	...	557	1526	38	1969	...	...	...	...	283	549	28	1509
9	...	...	...	...	615	1603	39	2124	...	...	...	...	292	541	28	1505
1880	...	...	...	...	639	1607	45	2137	...	...	...	...	299	541	27	1522
1	...	...	...	...	592	1584	36	2132	...	...	...	...	316	524	29	1520
2	...	...	...	...	631	1623	39	2217	...	...	...	...	318	528	31	1518
3	...	...	...	...	672	1746	40	2358	...	...	...	...	311	522	31	1507
4	...	...	...	...	693	1729	42	2447	...	...	...	...	306	499	33	1480
5	...	...	...	...	705	1798	37	2470	...	...	...	...	294	457	38	1405
6	...	...	...	...	682	1776	55	2519	...	...	...	...	305	435	31	1415
7	...	...	...	...	698	1790	50	2603	...	...	...	...	306	458	33	1859
8	...	...	...	...	646	2185	44	2956	...	...	...	...	286	459	34	2258
9	...	...	...	...	625	2061	50	2886	...	...	...	...	270	427	32	1635
1890	...	...	...	...	632	1978	51	2869	...	...	...	...	241	412	32	2164
1	...	...	...	...	633	1797	56	2865	...	...	...	...	228	387	32	2166
2	...	...	...	...	635	1676	50	?	...	...	...	...	313	481	31	?
3	...	...	...	...	566	1486	38	?	...	...	...	...	307	493	31	?
4	...	...	...	...	592	1461	32	2770	...	...	...	...	303	488	27	3757
5	...	...	...	...	582	1419	24	2521	...	...	...	...	303	564	22	4010
6	...	...	...	...	463	893	7	1364	...	...	...	...	287	579	19	4580
7	...	...	...	...	377	865	10	1377	...	...	...	...	292	593	28	4799
8	...	...	...	...	382	860	12	1406	...	...	...	...	328	602	28	5470
9	...	...	...	...	384	828	11	1352	...	...	...	...	317	540	30	4838
1900	...	...	...	...	386	810	9	1368	...	...	...	...	337	579	30	4144
1	...	...	...	...	382	795	10	1185	...	...	...	...	337	579	28	4129
2	...	...	...	...	379	780	10	1179	...	...	...	...	278	514	28	4375
3	...	...	...	...	373	775	12	1118	...	...	...	...	268	491	27	4363
4	...	...	...	...	385	771	17	994	...	...	...	...	239	471	27	4391
5	...	...	...	...	365	760	16	1065	...	...	...	...	216	415	34	4391
6	...	...	...	...	358	752	15	1000	...	...	...	...	221	398	34	4418

* The total includes the fishermen and fish-curers, and also the following:—(1) The number of coopers; number of labourers. After 1893 it includes also fishmongers, hawkers of fish, clerks, persons gathering persons employed on board vessels, curing, exporting, and carrying herrings and other fish, or importing

continued.

Districts in the Shore-curing Herring and Cod and Ling Fisheries, with the Number of Men Fish-curers, and the Total Number of Persons employed* in each year 1825–1906.

Year.	INVERARAY.				ROTHESAY.				STRANRAER, &C.				TOTALS.			
	Number of			Total Persons Employed.	Number of			Total Persons Employed.	Number of			Total Persons Employed.	Number of			Total Persons Employed.
	Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.		Boats.	Men and Boys.	Fish Curers.	
1870	968	2172	103	2870	524	1099	30	1846	497	888	11	1466	3029	6436	230	10224
1	962	2160	96	2816	568	1150	24	1898	479	849	8	1400	2998	6304	211	9275
2	953	2100	84	2731	579	1150	14	1885	480	849	6	1398	2983	6239	181	9872
3	934	2050	70	2624	563	1114	13	1762	485	852	6	1424	2895	6022	170	9537
4	862	1919	51	2454	553	1094	18	1732	475	827	10	1447	2772	5792	161	9313
5	823	1889	45	2406	535	1000	25	1584	480	831	8	1460	2676	5602	153	8835
6	809	1855	48	2558	498	816	27	1381	501	845	10	1513	2615	5427	152	8824
7	792	1818	35	2517	467	751	22	1194	544	901	13	1656	2669	5374	132	8744
8	750	1738	41	2067	442	677	19	985	556	926	73	1753	2588	5416	199	8283
9	690	1647	35	2110	418	657	21	993	569	952	78	1879	2584	5400	201	8611
1880	693	1648	39	2107	428	686	21	1007	591	958	86	1908	2650	5440	218	8681
1	692	1640	43	2128	429	684	15	970	609	976	93	1959	2638	5408	216	8709
2	711	1653	44	2142	434	695	22	1033	604	983	82	1957	2698	5482	218	8867
3	699	1557	39	1978	385	684	21	1013	614	999	96	2069	2643	5424	205	8836
4	684	1467	37	1886	371	675	22	996	605	1014	75	2089	2659	5384	209	8898
5	613	1337	30	1746	363	617	24	950	594	1038	94	1943	2571	5247	223	8514
6	619	1278	26	1674	350	560	23	876	568	1030	51	1841	2524	5079	186	8325
7	525	1185	27	1551	320	502	24	804	540	994	52	1752	2387	4929	186	8569
8	484	1118	23	1471	298	488	19	764	519	964	45	1857	2233	5214	165	9306
9	470	1097	18	1422	259	450	12	665	531	953	40	1860	2155	4988	152	8468
1890	452	1072	16	1369	232	430	13	635	516	921	78	2099	2073	4813	130	9136
1	433	1060	14	1321	224	421	13	628	506	909	49	1953	2024	4574	164	8933
2	444	1058	16	?	230	399	9	?	494	884	44	?	2116	4498	150	?
3	383	974	21	?	224	398	8	?	501	934	27	?	1981	4285	125	?
4	383	974	9	1361	248	343	4	608	496	936	17	1717	2122	4202	89	10213
5	376	953	9	1401	234	324	1	587	476	922	17	1772	1971	4182	73	10291
6	296	861	8	1113	218	313	4	486	479	936	7	1449	1743	3582	45	8992
7	291	842	27	1437	231	306	5	504	476	958	8	1461	1667	3564	78	9578
8	289	840	19	1377	228	294	7	453	459	827	14	1178	1686	3423	80	9884
9	314	852	13	1153	226	298	5	475	427	764	18	1118	1668	3246	77	8936
1900	323	863	17	1213	240	324	3	479	414	740	...	1065	1700	3316	59	8269
1	322	872	16	1181	228	301	6	470	415	740	3	1069	1684	3287	63	8034
2	323	888	16	1251	214	299	9	710	434	761	3	1088	1628	3242	66	8603
3	318	881	16	1212	206	299	6	641	442	747	5	1075	1607	3193	66	8409
4	316	890	16	1073	198	292	4	509	429	735	9	1025	1567	3159	73	7992
5	309	868	12	987	189	282	6	405	400	728	11	1010	1479	3053	79	7858
6	301	829	20	1061	176	247	6	468	395	704	10	1021	1451	2930	85	7968

(2) the number of persons employed in gutting, packing, re-packing, cleaning, or drying the fish ; (3) the bait and baiting lines, boat-builders, persons making and mending nets, persons manufacturing barrel staves, salt, stave wood, and hoops.

TABLE III.

Showing, for the Firth of Clyde Districts, the Total Number of Barrels of Herrings Cured, and the Estimated Total of the Number of Barrels of Herrings which were not Cured, in the Years 1843-1857.

Year.	CAMPBELTOWN.			STRANRAER AND DUMFRIES.			GREENOCK, AYR, &C.			INVERARAY.			ROTHESAY.			GLASGOW.			TOTAL.		
	Barrels Cured.	Not Cured.	Barrels Total.	Barrels Cured.	Not Cured.	Barrels Total.	Barrels Cured.	Not Cured.	Barrels Total.	Barrels Cured.	Not Cured.	Barrels Total.	Barrels Cured.	Not Cured.	Barrels To l.	Barrels Cured.	Not Cured.	Barrels Total.	Barrels Cured.	Not Cured.	Barrels Total.
1843	3736	3311	7047	2084	2587	4671	22884½	4986	27870½	8882	31660	40542	11987	614	12601	20596	...	20596	70169½	43158	113327½
4	1284	2561	3845	2764	1874	4638	16044	2340	18384	9004	6830	15834	9809	1112	10921	14196	...	14196	53101	14717	67818
5	1179	1800	2979	3800	2050	5850	18012½	2750	20762½	8983½	7825	16808½	9563	1950	11513	14470	...	14470	56008	16375	72383
6	4600	1500	6100	4446	2827	7273	17629½	2400	20029½	10003½	10400	20403½	6134	1500	7634	15530	...	15530	58343	18627	76970
7	4001	2050	6051	2555	3100	5655	15548½	2000	17548½	7857	11000	18857	4890	1500	6390	9977	...	9977	44828½	19650	64478½
8	3083	3500	6583	3344	3100	6444	12382	2000	14382	6028	10500	16528	3228½	1500	4728½	15454	...	15454	43519½	20600	64119½
9	5308	1300	6608	3208	2300	5503	22505½	3000	25505½	15609½	1000	16609½	9496½	1000	10496½	15957	...	15957	72084½	8600	80684½
1850	...	...	...	...	...	...	14298	3900	18198	17623	3440	21063	6047½	1500	7547½	10362½	...	10362½	48331	8840	57171
1	...	...	...	...	...	...	14502	4500	19002	35325	4500	39825	5313	1500	6813	20420	...	20420	75560	10500	86060
2	...	...	...	...	...	...	10645½	2100	12745½	12254½	2500	14754½	2217	1000	3217	15306	200	15506	40423	5800	46223
3	...	...	...	...	...	...	13794½	2850	16644½	23739	3500	27239	6054½	1500	7554½	25784½	...	25784½	69372½	7850	77222½
4	...	...	...	...	...	...	8456	1800	10256	20632½	3000	23632½	2399½	1000	3399½	12410	...	12410	43898	5800	49698
5	...	...	...	...	...	...	11139½	3976	15115½	28796½	4200	32996½	5074	1212	6286	18808	910	19718	63818	10298	74116
6	...	...	...	...	...	...	6595½	2330	8925½	35206½	4490	39696½	4373	964	5337	19075	390	19465	65250	8174	73424
7	...	...	...	...	...	...	6698	1455	8153	29152	4100	33252	5135½	1070	6205½	2354½	100	2454½	43340	6725	50065

TABLE IV.

Showing the Number of Barrels of Herrings actually Caught within the limits of the various Districts in the Firth of Clyde, irrespective of the place of landing, in the years 1863-1887.

Year.	Greenock.	Glasgow.	Rothesay.	Inveraray.	Campbeltown.	Ballantrae.	Total.
1863	127	96½	3500½	29717½	2020	...	35461½
1864	171	...	34786½	15586	2847½	...	53391
1865	981	...	33706½	28788½	2346	1015	66837
1866	803	120	44337	32199	1823½	382	79664½
1867	...	11093	32440½	38964	2450	...	84947½
1868	35876	38800	13701	46378	1524½	...	136279½
1869	26081	12150	27721	41138	6469	...	113559
1870	5091½	236	27911	24766	6381	27	64412½
1871	3140	235	22362½	20405½	7183	...	53326
1872	256	...	13284	10258	6352	...	30150
1873	822	...	4685	7516½	18036	76	31135½
1874	844	...	3822	6434½	19087	451	30638½
1875	919	...	4362	14097	6660	9667	35705
1876	1814	...	6296	31621½	11411	6071	57213½
1877	1527	...	4070½	23348½	18443	10254	57643
1878	683	...	2002	11268½	18320	17493	49766½
1879	1816	...	8303	31409	36847½	25300	103675½
1880	2418	...	11167½	29315	44522	31292	118714½
1881	1248	...	4162	38162	23862	17390	84824
1882	3949	...	11806	85352	53241	13401	167749
1883	2314	...	3297	49055	49089	26501	130256
1884	4129½	...	4154	19648	40921	14019	82871½
1885	8813	...	3673	26379	45342	27671	111878
1886	...	...	2168	18145	42312	4760	67385
1887	...	...	2381	15808	57684	9881	85754

TABLE V.

Showing, for the Firth of Clyde Districts, the Total Quantity and Value of Herrings sold Fresh in the years 1884-1888, and the Total Quantity and Value of Herrings landed, whether sold Fresh or Cured, in the years 1889-1906.

	HERRINGS SOLD FRESH.											
Year.	CAMPBELTOWN.		INVERARAY.		ROTHESAY.		GREENOCK.		BALLANTRAE.		TOTAL.	
	Crans	£	Crans	£	Crans	£	Crans	£	Crans	£	Crans	£
1884	5715	6771	1216	1840	2859	4075	1217	1604	5040	9743	16047	24033
5	5605	8379	908	1634	6409	8076	783	1186	3311	4751	17016	24026
6	5650	4265	683	1025	4859	6700	907	1893	2582	3621	14681	17504
7	5381	4075	617	778	9302	9917	1827	2306	2719	3418	19846	20494
8	6126	7348	842	1010	10422	10839	3185	5008	4555	3883	25130	28088
	TOTAL QUANTITY OF HERRINGS LANDED.											
	Crans	£	Crans	£	Crans	£	Crans	£	Crans	£	Crans	£
1889	33975	37669	26249	41847	8289	12561	1840	4439	10366	8271	80719	104787
1890	42282½	36368	33650	43746	9885	12080	1186	2135	19316	19221	106319½	113550
1	41326	39351	51877	54472	10452	10655	2378	5541	14346	16519	120379	126538
2	45758	50357	50158	50158	3325	4665	1173	2832	5643	5976	106057	113988
3	70850	55959	40790	40517	4344½	4818	1835	2895	2056	2662	119875½	106851
4	73346	68990	37349	40119	2038	2835	540	1130	2654	3152	115927	116226
5	29412	34187	18013	24433	2440	4599	1228	3158	3537	5148	54630	71525
6	15240	16535	18406	26676	2521	3098	679	1226	2296	2804	39142	50339
7	24294	21911	59261	41310	3602	2707	713	1052	2067	2317	89937	69297
8	25893	26169	40903	39464	2426	2359	339	467	1599	1795	71160	70254
9	31898	40251	31374	40876	3968	4410	610	770	2917	2765	70767	89072
1900	40557	52375	24742	36280	2275	2801	189	349	5473	5080	73236	96885
1	31349	32942	29317	33410	1833	2120	267	413	10550	8837	73316	77722
2	38017	38868	26337	30577	26049	14457	1876	1966	8037	9019	100316	94887
3	29762	37779	21198	30087	28360	19550	435	504	2244	2320	81999	90240
4	12929	17314	7832	15768	7540	8958	271	424	1454	1512	30027	43976
5	21160	21676	4672	7525	1738	1615	4455	4934	4480	4938	36505	40688
6	11070	16565	5258	5907	13709	14216	7860	7786	15699	17400	53596	61874

TABLE VI.

Showing the Number of Crans of Herrings landed per Month in the Ballantrae District, 1863-1906.

Year.	Jan.	Feb.	March	April.		May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1863	...	...	...	...	...	...	382	368	75	...	...	...	...
4	...	...	...	...	...	...	258	506	66	12	8	47	6
5	...	...	...	...	...	...	87	283	596	24	...	1,715	1,695
6	1	...	...	...	...	...	107	571	384	6	21	1,292	7
7	66	4	...	...	...	...	126	304	330	...	...	96	30
8	...	...	...	...	795*a*	...	...	...	452	215	98	212	28
9	...	...	...	...	...	...	425	1,225	534	51	25	5	14
1870	14	...	...	...	1,748*b*	...	1,942	1,245	182	16	17	35	101
1	35	...	...	...	1, 76*c*	...	650	194	12	5	29	2	10
2	...	...	...	...	1,725*	...	61	139	295	...	10	10	...
3	...	...	...	...	2,025*	42	372	1,185	196	58	20	31	...
4	...	...	...	...	4,890*	165	867	1,063	1,364	1	...	...	...
5	...	...	...	...	9,197*	50	13	218	221	30	...	...	...
6	...	...	...	...	6,071*	166	919	552	332	17	19	...	...
7	...	...	...	...	10,254*	498	433	621	381	...	10	...	...
8	5,070	10,958	1,779	23	...	240	327	364	...	...	...	30	14
9	7,930	6,276	4,974	454	...	671	343	580	415	62	187	10	4,085
1880	5,200	6,518	19,452	...	...	199	1,439	2,583	333	25	134	747	970
1	2,872	9,310	11,922	...	...	...	649	622	286	...	...	11	178
2	1,183	6,188	1,337	125	...	127	843	268	188	168	251	162	116
3	3,697	1,766	17,566	...	...	399	778	491	131	21	...	9	143
4	2,813	8,465	3,280	6	...	509	966	805	490	79	166	328	416
5	744	5,755	14,094	...	...	297	1,218	766	461	18	...	...	227
6	184	2,224	2,352	...	...	27	193	1,145	395½	94	206	28	37
7	48	754	9,074	...	...	15	431	603½	464½	35	153	103	70
8	450	2,127	6,938	...	...	90	513	1,328	404	8	149	...	913
9	875	8,981	759	...	...	139	477¼	623½	146½	...	...	597	1,070
1890	296	6,920	978	...	...	50	172	1,284¾	122¾	...	...	613	8,736
1	1,854	5,047	...	...	...	240¾	613¼	1,447	65¾	17½	299	963	2,946
2	...	1,577	1,736	21½	...	260	1,189	530	9	...	...	...	65
3	...	454	...	...	...	98	243	669	84	...	...	...	...
4	...	3	72	...	...	170	1,008	975	186	43	10	...	...
5	...	357	1,164	...	180	...	718	532	359	...	...	...	...
6	...	379	150	...	86	...	543	482	104	36	161	...	...
7	...	46	423	...	...	...	33	879	110	209	48	...	...
8	...	...	...	...	...	30*	865	324	90	7	...	...	...
9	...	...	...	...	145	1,247*	400	224½	348½	120	138	165	190
1900	...	449	3,664	...	106	...	567	280	316	36	43	11	8
1	...	5,652	3,743	...	110	...	497	263	121	43	...	108	...
2	2,450	3,072	1,316	...	145	...	325	466	106	157	...	...	...
3	530	177	25	...	96	51*d*	340	962	14	37	20	...	...
4	92	461	322	...	...	108*e*	122	238	78	27	...	...	...
5	...	...	...	...	...	2,987*f*	360	379	631	122	...	...	...
6	584	183	389	75		... ...	265	553	631	260	...	2,564	10,195

* Winter fishing.
a (1868)—386 crans from 1st January to 11th July, and 409 crans for rest of July.
b (1870)—1635 crans from 1st February to 1st June, and 113 crans in last week of May.
c (1871)—1621 crans from 1st February to 13th May, and 139 crans for rest of May.
d (1903)—From 3rd October to 26th December.
e (1904)—From 1st October to 31st December.
f (1905)—106 crans from 1st January to 27th May, and 2881 crans from 1st October to 31st December.

TABLE VII.

Showing the Number of Crans of Herrings landed per Month in the Campbeltown District, 1863-1906.

Year.	Jan.	Feb.	March.	April.	May.		June.	July.	August.	Sept.	Oct.	Nov.	Dec.
1863	...	...	...	...	...	...	210	1,674	58	5½	...	...	...
4	...	...	...	...	...	...	861	1,548	358	84½	...	...	...
5	...	...	...	...	...	...	370	1,167	1,012	13	1½	...	...
6	...	...	...	...	...	...	400	671	912	37	...	...	...
7	...	...	...	...	...	...	576	727	709	26	...	...	...
8	...	...	..	...	...	...	353	699	357	323	...	...	...
9	...	...	...	...	...	...	1,105	1,981	3,352	929	79	...	...
1870	...	...	...	...	...	...	1,713	2,712	2,802	634	524	124	...
1	...	...	...	...	...	...	1,144	1,258	1,461	910	290	...	...
2	...	...	...	...	...	...	286	4,245	4,381	4,225	2,295	...	...
3	...	...	...	...	...	...	711	6,286	4,106	3,502	1,286	...	...
4	...	...	...	...	...	...	1,258	5,263	3,719	3,076	1,467	617	...
5	...	...	...	...	...	...	495	1,117	1,086	365	2	...	...
6	...	...	...	...	...	...	733	1,689	3,760	1,073	20	...	...
7	...	...	...	...	...	...	1,168	3,617	6,136	1,118	42	...	...
8	...	...	...	...	...	800*a*	2,127	3,861	2,005	292	...	...	...
9	...	...	...	...	...	3,476*b*	1,127	5,131	3,781	4,172	8,646	7,526	121
1880	...	...	...	...	...	5,120*c*	2,330	12,073	5,426	2,579	2,584	2,625	4,783
1	...	...	...	...	...	1,280†	3,378	6,599	3,967	1,048	440	1,043	2,638
2	...	...	...	...	...	2,249†	7,329	12,415	10,357	5,339	5,920	...	...
3	...	...	...	...	...	1,859†	3,267	5,980	7,695	3,312	7,122	5,751	1,479
4	...	...	...	...	...	1,766†	2,363	8,672	5,799	925	9,654	4,393	...
5	...	...	...	...	...	2,363†	2,528	7,839	6,279	8,922	8,911	...	...
6	...	...	...	...	...	4,607†	2,075	2,684	4,319	2,684	2,045	3,114	7,790
7	...	...	...	...	...	6,210†	1,263	4,470½	3,330½	10,173	3,306	10,669	4,113
8	...	...	...	...	...	10,890†	704	4,690	6,349	2,279¼	4,702¾	5,012	6,742
9	...	...	...	...	...	7,534†	1,569	3,120½	2,620¾	2,392	5,572	8,162	1,936
1890	...	...	...	...	...	12,499†	1,157	3,527	156½	12	2,943½	5,053	105
1	...	...	...	...	...	12,845†	4,119	9,976	2,408½	146	1,244¼	259	...
2	...	...	...	...	...	2,193*d*	2,817	9,156	2,005½	37¼	1,594	184	177
3	...	...	...	...	...	3,601*e*	2,511	5,782	2,067	...	3	...	177
4	...	...	...	...	...	5,000†	7,844	3,967½	4,903½	2,017½	543	4	...
5	...	...	...	...	...	7,115½†	1,596	4,514½	2,076½	40	125	118	180
6	...	...	...	...	...	2,914†	2,177	3,380	2.104	1,109	2,457	460	392
7	...	...	...	...	...	393†	788	9,692	3,621	5,001	3,706	937	64
8	...	...	...	...	...	816†	6,421	4.937	1,780	2,771	387	2,116	4,589
9	...	...	...	...	...	4,120†	4,259	6,049	6,939	6,135	1,488	2,717	191
1900	...	...	...	...	...	3,994†	4,297	6,962	11,355	8,896	4,101	610	342
1	...	...	...	...	...	6,097†	3,721	6.261	7,648	3,241	894	1,081	2,406
2	...	...	...	...	...	3,881†	4,895	11,980	11,727	4,071	317	30	1,115
3	...	...	...	...	...	4,430†	3,180	9,088	9,797	694	...	272	2,301
4	...	...	...	...	...	5,872†	1,550	1,938	1,772	869	218	2	685
5	...	...	...	...	...	5,384†	2,886	7,737	5,175	6	32	138	100
6	...	...	...	...	...	3,562*f*	3,392	3,486	541	79	5	...	5

† From 1st January to end of May.
a (1878)—April and May.
b (1879)—3200 crans from 1st January to 24th May, and 276 crans from 24th to 31st May.
c (1880)—5090 crans from 1st January to 22nd May, and 30 crans from 22nd to 29th May.
d (1893)—From 1st January to 15th March.
e (1894)—From 1st January to end of March.
(1906)—3552 crans from 1st January to end of May, and 10 added at end of year.

TABLE VIII.

Showing the Number of Crans of Herrings landed per Month in the Inveraray District, 1854–1906.

Year.	Jan.	Feb.	March.	April.	May.		June.	July.	August.	Sept.	Oct.	Nov.	Dec.
1854	...	...	...	...	...	...	...	5,000	6,200	800	2,400	2,200	...
5	...	...	...	...	...	3,629*a*	...	5,721	10.650	2,000	3,980	4,324	869
6	...	...	...	...	...	2,418*b*	...	10,782	11,300	8,200	6,500	2,750	660
7	...	...	...	...	...	2,600*c*	...	8,800	5,600	2,600	3,800	1,200	...
8	...	...	...	...	...	3,000*d*	...	4,600	5,050	5,450	3,000	2,450	2,400
9	...	...	...	...	...	4,045*e*	...	6,055	2,750	2,780	1,744	4,569	8,452
1860	780	724	1,755	388	267	...	1,056	3,226	4,630	4,870	5,120	10,460	7,490
1	...	...	...	...	...	...	402	2,905	5,323	3,702	2,335	380	1,804
2	...	...	...	...	...	...	207	2,962	9,685	11,725	14,920	13,119	4,743
3	...	...	...	...	...	...	165	2,453	5,952	3,637	6,197	3,170	1,349
4	...	...	...	...	...	...	849	2,414	2,667	3,224	2,268	1,415	30
5	...	...	...	...	...	...	149	2,321	12,406	7,881	2,142	884	335
6	...	...	...	...	...	...	455	1,673	7,850	5,302	9,747	2,558	775
7	427	...	...	...	...	...	771	3,273	13,456	6,301	3,856	3,891	2,440
8	3,030	...	...	...	...	...	3,040	9,405	7,385	9,504	6,121	180	1,130
9	769	...	...	...	...	...	3,545	6,479	9,264	8,587	3,700	260	1,420
1870	925	...	...	...	...	...	3,580	5,972	5,170	3,089	3,703	3,675	795
1	1,840	...	...	...	...	...	3,415	2,552	2,400	717	2,082	469	40
2	...	...	...	...	...	...	715	1,550	1,982	1,261	499	2,230	820
3	...	...	...	...	...	...	1,045	1,807	134	238	424	...	...
4	...	...	...	...	...	...	715	1,365	917	1,302	490	17	...
5	10	...	...	...	...	...	650	5,675	4,069	425	1,202	1,215	300
6	30	...	...	...	...	...	1,175	4,720	4,177	1,986	7,245	3,503	...
7	...	...	...	...	...	...	2,614	4,118	5,430	4,369	2,217	870	...
8	...	...	...	...	...	...	1,344	3,885	1.271	96	24	2,140	130
9	...	...	...	...	...	...	2,168	5,744	7,409	2,805	2,396	523	...
1880	...	...	...	...	...	...	1,817	7,518	3,922	2,439	1,420	4,570	1,082
1	...	...	...	...	...	...	4,932	5,893	9,546	5,179	2,248	3,790	1,355
2	...	...	...	...	...	...	3,585	7,860	11,878	8,320	12,663	11,424	24
3	...	...	...	...	...	...	3,304	8,465	7,637	11,005	3,166	2,520	12
4	...	...	...	...	...	...	5,154	3,275	5,004	1,717	606	...	...
5	...	...	...	...	...	...	7,187	7,244	5,522	4,047	4,847	...	...
6	...	...	...	...	...	...	2,921	4,592	4,947	2,021	262	176	143
7	...	...	...	...	1,032	...	3,577	3,222	2,676	2 852½	781	198	22
8	...	...	...	...	...	...	1,111	7,147	8,640	1,919	1,092	349	...
9	...	...	..	...	...	...	1,830	6,364	5,267	3,843½	10,125	2,436	...
1890	...	...	...	..	...	...	1,936	12,303	8,254	3,809½	3,285	3,463	5,241
1	...	...	...	...	...	...	2,159	10,283	3,783¾	3,639¼	9,388	11,038	7,937
2	...	...	...	...	...	...	4,509	9,206	11,129	8,406½	3,641	3,377	7,140
3	...	...	...	...	...	...	3,251	10,802½	10,075½	2,700½	705	4,416	4,439
4	...	...	...	...	...	555*	3,049	10,827	9,320	3,024	1,041	3,100	7,451
5	...	...	...	...	...	1,090*	2,117	4,271	5,508	1,674	155	1,800	1,238
6	...	...	...	...	...	2,012*	1,444	3,874	3,591	2,314	2,405	2,442	324
7	...	...	...	...	...	849*	1,756	5,876	10,797	19,900	6,316	5,763	5,563
8	...	...	...	...	...	736*	4,252	11,636	8,895	5,700	3,481	3,777	2,324
9	...	...	...	...	...	...	3,013	8,552	9,573	2,899	1,691	3,798	2,587
1900	...	...	...	...	...	137*	3,623	7,523	5,323	3,498	1,536	1,671	1,432
1	...	...	...	...	...	100*f*	2,936	5,968	8,490	7,177	1,365	743	2,116
2	...	...	...	...	...	...	851	6,373	5,652	4,201	4,059	2,513	2,690
3	...	...	...	...	.	12*	865	9,303	2,477	6,511	1,277	111	642
4	...	...	...	...	252	69†	1,808	3,012	1,884	565	13	...	224
5	...	...	...	...	970	558†	512	440	327	210	328	419	908
6	...	...	...	...	522	234†	706	1,022	286	699	1,484	255	50

* From 1st January to end of May.

† From 1st January to end of April.

a 1326 crans from 1st January to 9th June, and 2303 crans from 9th to 30th June.

b 1178 crans from 1st January to 14th June, and 1240 crans from 14th to 28th June.

c 1716 crans from 1st January to 13th June, and 884 crans from 13th to 27th June.

d From 1st January to end of June.

e 3209 crans from 1st January to 11th June, and 836 crans from 11th June to 2nd July.

f 100 crans from 1st January to 18th May, and 222 crans from 18th to end of May.

TABLE IX.

Showing the Number of Crans of Herrings landed per Month in the Districts of Inveraray and Campbeltown, 1854–1906.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Total.*
1854	...	...	...	...	...	...	5,000	6,200	800	2,400	2,200	...	16,600
5	...	...	...	...	...	...	5,721	10,650	2,000	3,980	4,324	869	31,173
6	...	...	...	...	...	...	10,782	11,300	8,200	6,500	2,750	660	42,610
7	...	...	...	...	...	...	8,800	5,600	2,600	3,800	1,200	...	24,600
8	...	...	...	...	...	...	4,600	5,050	5,450	3,000	2,450	2,400	25,950
9	...	...	...	...	...	...	6,055	2,750	2,780	1,744	4,569	8,452	30,395
1860	780	724	1,755	338	267	1,056	3,226	4,630	4,870	5,120	10,460	7,490	40,766
1	...	...	...	...	...	402	2,905	5,323	3,702	2,335	380	1,804	16,851
2	...	...	...	...	...	207	2,962	9,685	11,725	14,920	13,119	4,743	57,361
3	...	...	...	...	...	375	4,127	6,010	3,642½	6,197	3,170	1,349	24,870½
4	...	...	...	...	...	1,710	3,962	3,025	3,308½	2,268	1,415	30	15,718½
5	...	...	...	...	...	345	3,662	13,418	7,894	2,143½	884	335	28,681½
6	...	...	...	...	...	855	2,344	8,762	5,339	9,747	2,558	775	30,380
7	427	...	...	...	...	1,347	4,000	14,165	6,327	3,856	3,891	2,440	36,453
8	3,030	...	...	...	...	3,393	10,104	7,742	9,827	6,121	180	1,130	41,527
9	769	...	...	...	...	4,650	8,460	12,616	9,516	3,779	260	1,420	41,470
1870	925	...	...	...	...	5,293	8,684	7,972	3,723	4,227	3,799	795	35,418
1	1,840	...	...	...	...	4,559	3,810	3,861	1,627	2,372	469	40	18,578
2	...	...	...	...	...	1,001	5,795	6,363	5,486	2,794	2,230	820	24,489
3	...	...	...	...	...	1,756	8,093	4,240	3,740	1,710	...	...	19,539
4	...	...	...	...	...	1,973	6,628	4,636	4,378	1,957	634	...	20,206
5	...	...	...	...	...	1,145	6,792	5,155	790	1,204	1,215	300	16,611
6	...	...	...	...	...	1,908	6,409	7,937	3,059	7,265	3,503	...	30,111
7	...	...	...	...	...	3,782	7,735	11,566	5,487	2,259	870	...	31,699
8	...	...	...	...	...	3,471	7,746	3,276	388	24	2,140	130	17,975
9	...	...	...	...	...	3,295	10,875	11,190	6,977	11,042	8,049	121	55,025
1880	...	...	...	...	...	4,147	19,591	9,348	5,018	4,004	7,195	5,865	60,288
1	...	...	...	...	...	5,864	14,938	13,513	6,227	2,688	4,833	3,993	53,336
2	...	...	...	...	...	6,115	25,074	22,235	13,659	18,583	11,424	24	99,363
3	...	...	...	...	...	6,571	14,445	15,332	10,670	13,935	8,271	1,491	72,574
4	...	...	...	...	...	6,431	9,732	14,104	2,642	10,260	4,393	...	49,328
5	...	...	...	...	...	9,715	15,083	11,801	12,969	13,758	...	...	65,689
6	...	...	...	...	...	4,996	7,276	9,266	4,705	2,307	3,290	7,933	44,380
7	...	...	...	...	...	4,840	7,692½	6,006½	13,025½	4,087	10,867	4,135	57,895½
8	...	...	...	...	...	1,815	11,837	14,989	4,198¼	5,794¾	5,361	6,742	61,627
9	...	...	...	...	...	3,399	9,484½	7,887¾	6,235½	15,697	10,598	1,936	62,771¾
1890	...	...	...	...	...	3,093	15,830	8,410½	3,821½	6,228½	8,516	5,346	63.744½
1	...	...	...	...	...	6,278	20,259	6,192¼	3,785¼	10,632¼	11,297	7,937	79,225¾
2	...	...	...	...	...	7,326	18,362	13,134½	8,443¾	5,235	3,561	7.317	65.572¼
3	...	...	...	...	...	5,762	16,584½	12,142½	2,700½	708	4,416	4,616	50,530½
4	...	...	...	...	...	10,893	14,794½	14,223½	5,041½	1,584	3,104	7,451	62,646½
5	...	...	...	...	...	3,713	8,785½	7,584½	1.714	280	1,918	1,418	33,618½
6	...	...	...	...	...	3,621	7,254	5,695	3,423	4,862	2,902	696	33,379
7	...	...	...	...	...	2,544	15,568	14,418	24,901	10,022	6,700	5,627	81,022
8	...	...	...	...	...	10,673	16,573	10,675	8,471	3,868	5,893	6,913	64,618
9	...	...	...	...	...	7,272	14,601	16,512	9,034	3,179	6,515	2,778	64,011
1900	...	...	...	...	...	7,547	14,485	16,678	12,394	5,637	2,281	1,774	65,300
1	...	...	...	...	...	6,657	12,229	16,138	10,418	2,259	1,824	4,522	60,466
2	...	...	...	...	...	5,746	18,353	17,379	8,272	4,376	2,543	3,805	64,355
3	...	...	...	...	...	4,045	18,391	12,274	7,205	1,277	383	2,943	50,960
4	...	...	...	...	...	3,358	4,950	3,656	1,434	231	2	909	20,733
5	...	...	...	...	...	3,398	8,177	5,502	216	360	557	1,008	26,130
6	...	...	...	...	...	4,098	4,508	827	778	1,489	255	55	16,328

* Including other quantities referred to in Tables

TABLE X.

Showing the Number of Crans of Herrings landed per Month in the Greenock District, 1855-1906.

Year.	Jan.	Feb.	March.	April.	May.		June.	July	August.	Sept.	Oct.	Nov.	Dec.
1855	...	...	...	...	...	1,804*a*	...	1,630	166	...	...	...	...
6	...	...	...	...	...	290*b*	...	210	10	...	...	...	...
7	...	...	...	...	...	190*c*	...	540	60	10	...	...	...
8	...	...	...	...	...	90*d*	...	1,887	108	...	...	...	...
9	...	...	...	...	...	650*e*	...	950	50	...	...	...	...
1860	...	...	...	...	...	220*f*	...	500	1,650	530	50	...	...
1	...	...	...	...	...	95*g*	...	535	95	...	...	...	...
2	...	...	...	...	...	70*h*	...	896	2,564	1,675	55	...	...
3	...	...	...	...	...	129*i*	...	456	122	13	½	...	...
4	...	...	...	...	...	...	113	482	251	38	57	328	4
5	...	...	...	...	...	...	24	249	1,200	232	113	2,322	855
6	437	...	...	...	...	...	38	580	506	37	132	927	67
7	309	...	...	...	...	...	28	176	403	98	68	118	66
8	...	...	...	...	...	20*	...	576	401	428	3,179	19,796	9,240
9	470	...	...	...	...	...	101	706	1,036	476	9,051	4,178	652
1870	300	...	...	...	...	...	552	1,146	644	318	102	240	1,048
1	40	...	...	...	...	...	414	233	143	20	22	688	700
2	...	...	...	...	...	15*j*	...	62	141	82	244	9	...
3	...	...	...	...	...	...	75	791	196	108	468	288	...
4	...	...	...	...	...	...	372	338	696	439	...	...	...
5	...	...	...	...	...	...	...	193	418	81	...	...	...
6	...	...	...	...	...	...	262	366	757	115	17	...	...
7	...	...	...	...	...	...	234	401	710	148	9	...	...
8	...	...	...	...	64	...	88	231	222	3	...	...	...
9	...	...	...	...	...	98*	...	606	501	301	74	...	...
1880	...	...	...	...	...	260*	...	1,389	411	57	...	...	...
1	...	...	...	...	...	132*	...	432	463	187	...	...	...
2	...	...	...	...	...	284*	...	671	1,592	1,165	22	...	...
3	...	...	...	...	...	149*	...	453	531	386	...	...	...
4	...	...	...	...	...	...	164	789	898	166	...	...	...
5	...	...	...	...	...	...	318	557	391	95	..	...	...
6	...	...	...	...	...	...	15	350	310	12½	...	...	...
7	...	...	...	...	...	...	36	515½	835	249½	...	...	...
8	...	...	...	...	...	...	688	1,211	1,127½	44½	...	...	...
9	...	...	...	...	64	...	656¼	858¾	476	13	...	...	...
1890	...	...	...	...	218½	...	82¾	591	161¾	13½	...	...	...
1	...	...	...	...	57	...	792¼	1,103½	527	62¾	...	...	...
2	...	...	...	...	13	...	467½	440	186¾	...	...	...	...
3	...	...	...	...	136	...	265½	908¼	684¾	66	...	...	...
4	...	...	...	...	8½	...	196¼	242¼	80	...	...	...	...
5	...	...	...	...	...	...	496	392½	223	16½	...	...	...
6	...	...	...	...	...	...	146¼	397¾	118	...	...	...	...
7	...	...	...	...	22	...	8	329	241	88	...	...	...
8	...	...	...	...	...	44†	23	144	75	9	...	...	...
9	...	...	...	...	...	200†	24½	38	249	70	1	...	...
1900	...	...	...	...	...	9†	78	31¾	27	32	4¼	...	...
1	...	...	...	...	...	12½†	15	127	74	20	2	...	...
2	...	...	...	...	...	377*k*	...	98	87	12	1,381	...	...
3	...	...	...	...	...	28*	...	256	38	10	...	...	...
4	...	...	...	...	...	168*l*	...	58	29	16	...	...	...
5	...	...	...	...	...	375*m*	...	38	317	1,533	1,971	221	...
6	...	...	...	...	...	687*	...	141	1,304	1,630	451	2,014	1,638

* From 1st January to end of June.
† ,, ,, ,, ,, ,, ,, May.
a 1391 crans from 1st January to June 23rd, and 413 crans from June 23rd to 30th.
b 70 ,, ,, ,, ,, ,, ,, 14th ,, 220 ,, ,, ,, 14th ,, 28th.
c 15 ,, ,, ,, ,, ,, ,, 13th ,, 175 ,, ,, ,, 13th ,, 27th.
d 7 ,, ,, ,, ,, ,, ,, 5th ,, 83 ,, ,, ,, 5th ,, 26th.
e 52 ,, ,, ,, ,, ,, ,, 18th ,, 598 ,, ,, ,, 18th ,, July 2nd.
f 17 ,, ,, ,, ,, ,, ,, 9th ,, 203 ,, ,, ,, 9th ,, 30th.
g 50 ,, ,, ,, ,, ,, ,, 22nd ,, 45 ,, ,, ,, 22nd ,, 29th.
h 4 ,, ,, ,, ,, ,, ,, 7th ,, 66 ,, ,, ,, 7th ,, 28th.
i 49 ,, ,, ,, ,, ,, ,, 6th ,, 80 ,, ,, ,, 6th ,, 27th.
j From 1st June to 6th July.
k Landed in small quantities.
l Winter 18 crans, and 150 crans landed since 1st October.
m ,, 79 ,, ,, 296 ,, ,, ,, 11th November ,

TABLE XI.

Showing the Number of Crans of Herrings per Month landed in the Rothesay District, 1854-1906.

Year.	Jan.	Feb.	Mar.	April.	May.		June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1854	...	...	...	...	...	...	...	300	180	...	...	...	...
5	...	...	...	...	...	...	1,800	1,600	700	...	...	...	...
6	...	...	...	...	...	...	500	1,000	1,100	475	...	...	...
7	...	...	...	...	...	...	150	1,350	200	440	360	...	...
8	...	...	...	...	...	500*a*	...	800	1,080	200	...	...	...
9	...	...	...	...	...	...	...	440	230	...	...	550	...
1860	...	...	...	...	...	...	...	240	3,070	1,990	2,200	620	850
1	...	...	...	...	...	...	10	531	460	100	1,170	410	50
2	...	...	...	...	...	...	...	255	1,595	325	...	89	20
3	...	...	...	...	...	...	8	532	340	107	231	592	2,832
4	...	...	...	...	...	...	...	1,400	560	880	4,267	12,580	16,631
5	...	...	...	...	...	...	10	690	4,542	2,758	6,950	6,986	16,500
6	...	...	...	...	...	...	...	306	2,455	579	3,098	15,699	5,780
7	...	...	...	...	...	...	...	...	400	220	5,014	3,077	7,320
8	...	...	...	...	...	...	...	120	305	560	930	228	4,634
9	...	...	...	...	...	...	406	...	937	1,565	3,430	5,580	8,825
1870	...	...	...	...	...	...	...	1,370	1,090	1,133	1,050	2,141	9,000
1	...	...	...	...	...	...	800	455	1,315	525	38	4,696	4,500
2	...	...	...	...	...	...	...	80	740	720	880	4,290	2,245
3	...	...	...	...	...	...	50	704	368	1,218	626	15	...
4	...	...	...	...	...	...	...	603	1,220	963	334	100	...
5	...	...	...	...	...	...	...	533	907	94	137	506	...
6	...	...	...	...	...	...	..	422	1,156	1,435	851	1,096	2
7	...	...	...	...	...	...	...	421	1,446	408	480	918	...
8	...	...	...	...	...	...	25	428	386	18	...	118	62
9	...	...	...	...	...	...	92	955	1,102	760	1,775	1,172	18
1880	...	...	...	...	...	...	176	3,703	1,638	248	855	1,956	253
1	...	...	...	...	...	...	...	264	832	22	...	192	68
2	...	...	...	...	...	350*b*	...	789	541	170	1,551	1,651	25
3	...	...	...	...	...	410*c*	...	305	286	137	343	484	42
4	...	...	...	...	...	552*d*	...	826	1,293	340	874	431	245
5	...	...	...	...	...	1,050*e*	190	783	378	662	3,088	558	476
6	...	...	...	...	...	125*f*	...	613	603½	123½	1,911	570	488
7	...	...	...	...	...	250*	...	1,920	2,965	1,681	1,650	1,240	670
8	...	...	...	...	...	697*g*	377	2,890	4,015¼	995½	490¼	371	83
9	...	...	...	...	...	42*h*	452	1,393½	3,468¼	1,227	1,731½	519¾	15
1890	...	...	...	...	...	276½ *i*	56	6,002	8,612½	2,548½	515½	593	145
1	...	...	...	...	...	278 *j*	792	4,764½	2,275½	833	476	1,980	114
2	...	...	...	...	...	525*	...	823	722¾	434	2,22¼	136	10
3	...	...	...	...	...	368*	...	1,880	996¼	154¾	20	133	...
4	...	...	...	...	...	364*	...	1,089	528	80	74	8	...
5	...	...	...	...	...	100†	707	780	516	89	78	6	...
6	...	...	...	...	...	442*	...	937	548	236	253	30	...
7	...	...	...	...	...	177*	...	919	749	1,108	251	322	12
8	...	...	...	...	...	368*	...	658	478	303	99	222	...
9	...	...	...	...	...	273*k*	119	411	820	430	1,028	458	...
1900	...	...	...	...	...	287 *l*	106	315	475	709	81	...	...
1	...	...	...	...	...	368*r*	...	506	626	280	45	...	...
2	...	...	...	...	...	183‡	262	624	560	224	2,705	12,344	9,147
3	7,131	144	...	...	...	285‡	152	413	351	3,327	2,944	2,717	10,897
4	...	...	...	...	...	3,013*m*	38	204	366	2,574	335	48	962
5	...	...	...	...	...	430*n*	40	293	181	391	285	73	45
6	...	...	...	...	...	163*p*	133	416	2,754	6,070	3,904	72	197

* From 1st January to end of June.
† From 1st January to end of May.
‡ For small creeks.
a (1858)—For January and February.
b (1882)—Up to 8th July.
c (1883)—Up to 14th July.
d (1884)—Up to 5th July.
e (1885)—Up to 20th June.
f (1886)—Up to 3rd July.
g (1888)—Up to 23rd June.
h (1889)—Up to 22nd June.
i (1890)—Up to 14th June.
j (1891)—Up to 20th June.
k (1899)—Up to 17th June.
l (1900)—104 crans up to June 16th, and 183 crans for small creeks in July.
m (1904)—Winter 2843 crans, 170 crans up to June 20th.
n (1905)—Winter 206 crans, 204 crans up to June 24th, 20 crans from small creeks.
p (1906)—Winter 57 crans, 106 crans up to June 2nd.
r (1901)—Up to end of June 338 crans, and 30 crans landed in small quantities.

Notes—97 crans are added to month of October, 1904, for small creeks for which no details are to be had.
47 Do. do. October, 1905, do. do. do.

TABLE XII.

Showing the Number of Crans of Herrings landed per Month for the whole Clyde Area, 1854-1906.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1854	...	...	...	...	...	...	5.300	6,380	800	2,400	2,200	...	17,080
5	...	...	...	...	...	...	8,951	11,516	2,000	3,980	4,324	869	38,873
6	...	...	...	...	...	...	11,992	5,860	8,675	6,500	2,750	660	46,195
7	...	...	...	...	...	...	10,692	6,238	3,050	4,160	1,200	...	27,900
8	...	...	...	...	...	...	7,287	3,030	5,650	3,000	2,450	2,400	30,615
9	...	...	...	...	...	...	7,445	12,410	2,780	1,744	5,119	8,452	33,265
1860	...	...	...	...	...	...	3,966	9,350	7,390	7,370	11,080	8,340	52,686
1	...	...	...	...	...	...	3,971	5,878	3,802	3,505	790	1,854	20,307
2	...	...	...	...	...	...	4,113	13,844	13,725	14,975	13,208	4,763	64,905
3	...	...	...	...	...	...	5,483	6.547	3,762½	6,428½	3,762	4,181	31,058
4	...	...	...	...	...	2,081	6,350	3,902	4,238½	6,600	14.370	16,671	54,212½
5	...	...	...	...	...	466	4,884	19,756	10,908	9,206½	11,907	19,385	76,512½
6	7,898	...	...	...	...	1,000	3,801	12,107	5,961	12,998	20,476	6,549	70,790
7	13,562	4	...	...	...	1,501	4,480	15,298	6,645	8,938	7,182	9,856	67,466
8	...	...	...	...	...	...	...	8,900	11,030	10,328	20,416	15,032	86,679
9	4,589	...	...	...	...	5,582	10,391	15,123	11,608	16,285	10,023	10,911	84,512
1870	3,689	...	...	...	...	7,787	12,445	9,888	5,190	5,396	6,215	10,944	63,302
1	6,175	...	...	...	...	6,423	4,692	5,331	2,177	2,461	5,855	5,250	40,124
2	180	...	...	...	...	1,062	6,076	7,539	6,288	3,928	6,539	3,065	36,417
3	170	...	...	...	42	2,253	10,773	5,000	5,124	2,824	334	...	28,545
4	...	...	...	...	165	3,212	8,632	7,916	5,781	2,291	734	...	33,621
5	10	...	...	...	50	1,158	7,736	6,701	995	1,341	1,721	300	29,209
6	30	...	...	...	166	3,089	7,749	10,182	4,626	8,152	4,599	2	44,666
7	...	...	...	...	498	4,449	9,178	14,103	6,043	2,758	1,788	...	49,071
8	5,070	10,958	1,779	...	...	3,911	8,769	3,884	409	24	2.288	206	38,425
9	...	...	...	...	...	...	13,016	13,208	8,100	13,078	9,231	4,224	88,466
1880	...	...	...	...	...	...	27,266	11,730	5,348	4,993	9,898	7,088	108,834
1	...	...	...	...	...	...	16,256	15,094	6,436	2,688	5,036	4,239	81,778
2	...	...	...	...	...	...	26,802	24,556	15,162	20,407	13,237	165	119,130
3	...	...	...	...	...	...	15,694	16,280	11,214	14,278	8,764	1,676	101.101
4	...	...	...	...	...	...	12,152	16,785	3,227	11,300	5,152	661	74,229
5	...	...	...	...	...	...	17,189	13,031	13,744	16,846	558	703	97,815
6	...	...	...	...	...	...	9,384	10,575	4,935	4,424	3,888	8,457	56,387
7	...	...	...	...	...	...	10,731½	10,271	14,991	5,890	12,210	4,875	81,658½
8	...	...	...	...	...	...	17,266	20,535¾	5,246¼	6,434	5,732	7,738	87,537
9	...	...	...	...	...	...	12,360¼	11,978½	7,475½	17,428½	11,714¾	3,021	87,357
1890	...	...	...	...	...	...	23,707¾	17,307½	6,383½	6,744	9,722	14,227	102,733
1	...	...	...	...	...	...	27,574	9,060½	4,698½	11,407¼	14,240	10,997	106,774¼
2	...	...	...	...	...	...	20,155	14,053½	8,877¾	5,457¼	3,697	7,392	74,940
3	...	...	...	...	...	...	20,041¾	13,907½	2,921¼	728	4,549	4,616	57,691
4	...	...	...	...	...	...	17,100¾	15,017½	5,164½	1,668	3,112	7,451	67,783½
5	...	...	...	...	...	5,634	10,490	8,682	1,819½	358	1.924	1,418	40,332½
6	...	...	...	...	...	...	9,070¾	6,465	3,695	5,276	2,932	696	38,428
7	...	...	...	...	...	...	17,695	15,518	26,306	10,321	7,022	5,639	86,996
8	...	...	...	...	...	...	17,699	11,318	8,790	3.967	6,115	6,913	68,357
9	...	...	...	...	...	...	15,274½	17,929½	9,654	4,346	7,138	2,968	71,110½
1900	...	...	...	...	...	...	15,111¾	17,396	13,171	5,765¼	2,292	1,782	72,935
1	...	...	...	...	...	7,169	13,125	16,959	10,731	2,306	1,932	4,552	73,078½
2	...	...	...	...	...	6,333	19,541	18,132	8,665	8,462	14,887	12,952	100,397
3	...	...	...	...	...	4 537	20,022	12,677	10,579	4,241	3,100	13,840	81,905
4	...	...	...	...	...	3,518	5,450	4,129	4,051	566	50	1,871	29,992
5	...	...	...	...	...	3,798	8,887	6,631	2,262	2,616	851	1,053	36,802
6	...	...	...	...	...	4,496	5,618	5,516	8,738	5,844	4,905	12,085	53,601

TABLE XIII.

Showing the Number of Crans of Herrings landed Yearly at each District in Clyde Area, 1854–1906.

Year.	Ballantrae.	Campbeltown.	Inveraray.	Greenock.	Rothesay.	Total.
1854 ...	...	...	16,600	...	480	17,080
5 ...	...	...	31,173	3,600	4,100	38,873
6 ...	...	...	42,610	510	3,075	46,195
7 ...	...	...	24,600	800	2,500	27,900
8 ...	...	...	25,950	2,085	2,580	30,615
9 ...	...	...	30,395	1,650	1,220	33,265
1860 ...	...	...	40,766	2,950	8,970	52,686
1 ...	...	...	16,851	725	2,731	20,307
2 ...	...	...	57,361	5,260	2,284	64,905
3 ...	825	1,947½	22,923	720½	4,642	31,058
4 ...	903	2,851½	12,867	1,273	36,318	54,214½
5 ...	4,400	2,563½	26,118	4,995	38,436	76,512½
6 ...	2,389	2,020	28,360	2,724	35,297	70,790
7 ...	956	2,038	34,415	1,266	28,791	67,466
8 ...	1,800	1,732	39,795	33,640	9,712	86,679
9 ...	2,279	7,446	34,024	16,670	24,093	84,512
1870 ...	5,300	8,509	26,909	4,350	18,234	63,302
1 ...	2,697	5,063	13,515	2,260	16,589	40,124
2 ...	2,240	15,432	9,057	553	9,135	36,417
3 ...	3,929	15,891	3,648	1,926	3,151	28,545
4 ...	8,350	15,400	4,806	1,845	3,220	33,621
5 ...	9,729	3,065	13,546	692	2,177	29,209
6 ...	8,076	7,275	22,836	1,517	4,962	44,666
7 ...	12,197	12,081	19,618	1,502	3,673	49,071
8 ...	18,805	9,085	8,890	608	1,037	38,425
9 ...	25,987	33,980	21,045	1,580	5,874	88,466
1880 ...	37,600	37,520	22,768	2,117	8,829	108,834
1 ...	25,850	20,393	32,943	1,214	1,378	81,778
2 ...	10,956	43,609	55,754	3,734	5,077	119,130
3 ...	25,001	36,465	36,109	1,519	2,007	101,101
4 ...	18,323	33,572	15,756	2,017	4,561	74,229
5 ...	23,580	36,842	28,847	1,361	7,185	97,815
6 ...	6,885½	29,318	15,062	687½	4,434	56,387
7 ...	11,751	43,535	14,360½	1,636	10,376	81,658½
8 ...	12,920	41,369	20,258	3,071	9,919	87,537
9 ...	13,668¼	32,906¼	29,865½	2,068	8,849	87,357
1890 ...	19,172	25,453	38,291½	1,067½	18,749	102,733
1 ...	13,493	30,997¾	48,228	2,542½	11,513	106,774¼
2 ...	5,387½	18,163¾	47,408½	1,107¼	2,873	74,940
3 ...	1,548	14,141	36,389½	2,060½	3,552	57,691
4 ...	2,467	24,279½	38,367	527	2,143	67,783½
5 ...	3,310	15,765½	17,853	1,128	2,276	40,332½
6 ...	1,941	14,973	18,406	662	2,446	38,428
7 ...	1,748	24,202	56,820	688	3,538	86,996
8 ...	1,316	23,817	40,801	295	2,128	68,357
9 ...	2,978	31,898	32,113	582½	3,539	71,110½
1900 ...	5,480	40,557	24,743	182	1,973	72,935
1 ...	10,537	31,349	29,117	250½	1,825	73,078½
2 ...	8,037	38,016	26,339	1,955	26,049	100,397
3 ...	2,252	29,762	21,198	332	28,361	81,905
4 ...	1,448	12,906	7,827	271	7,540	29,992
5 ...	4,479	21,458	4,672	4,455	1,738	36,802
6 ...	15,699	11,070	5,258	7,865	13,709	53,601

TABLE XIV.

Showing the Number of Boats per Month Fishing in the Ballantrae District, 1863-1906.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1863	...	...	...	...	...	286	325	136	3	...	...	...	750
4	...	...	...	...	...	355	284	99	13	5	19	3	778
5	...	...	...	...	...	227	201	185	6	...	101	115	835
6	3	...	...	...	...	202	219	141	6	2	139	28	740
7	47	...	...	...	...	191	224	199	3	...	10	2	676
8	16	...	...	...	...	...	148	142	43	25	12	10	396
9	8	...	...	...	...	206	319	174	19	28	5	6	765
1870	37	...	..	...	48	332	269	88	15	13	23	5	830
1	22	...	...	...	116	420	238	23	5	8	4	1	837
2	...	...	...	...	...	247	217	157	...	4	5	...	630
3	...	...	...	...	26	231	336	99	17	5	16	...	730
4	...	...	...	...	57	267	304	109	2	...	...	...	739
5	...	...	...	...	84	164	209	142	18	...	...	...	617
6	...	...	...	...	150	354	262	158	10	17	...	...	951
7	...	...	...	...	237	263	238	113	...	2	...	...	853
8	386	692	577	15	183	327	197	...	...	...	10	21	2408
9	838	961	711	57	174	312	195	198	50	63	15	434	4008
1880	983	1004	647	10	107	447	543	193	58	70	478	301	4841
1	1200	1202	606	...	...	483	368	176	...	...	86	273	4394
2	754	1227	433	...	178	703	184	51	40	45	21	186	3822
3	856	812	555	...	322	553	341	125	41	...	2	162	3769
4	599	979	423	40	357	511	376	167	31	16	34	82	3615
5	312	1029	755	...	189	498	465	179	14	...	...	38	3479
6	201	764	764	...	24	257	501	242	57	82	36	48	2976
7	94	254	307	...	7	317	283	170	34	7	57	46	1576
8	121	137	170	...	97	285	262	171	8	43	...	146	1440
9	178	372	54	...	101	295	244	112	...	...	42	196	1594
1890	129	451	174	...	124	183	321	82	...	...	74	502	2040
1	333	665	...	...	140	301	308	64	18	24	207	315	2375
2	...	118	99	16	114	387	288	16	...	...	...	34	1072
3	6	132	5	...	110	263	169	37	...	...	...	...	722
4	...	3	40	...	100	307	294	125	22	2	...	...	893
5	...	51	119	...	141	299	270	152	...	...	...	...	1032
6	...	9	23	...	92	256	228	40	15	60	...	...	723
7	...	21	51	...	...	74	276	79	50	51	...	...	602
8	...	...	...	...	...	240	202	?	?	...	...	...	442
9	...	...	...	...	58	243	130	157	47	67	48	...	750
1900	...	77	132	...	48	185	134	87	17	30	13	6	729
1	...	336	146	..	71	160	125	62	34	...	...	...	934
2	248	407	198	..	63	107	180	77	...	...	...	...	1280
3	117	101	38	...	52	115	183	6	44	21	...	...	677
4	46	136	63	...	...	121	143	70	23	...	...	...	602
5	...	...	...	...	...	146	120	156	46	...	...	...	468
6	...	80	45	...	...	133	136	142	68	...	184	387	1175

TABLE XV.

Showing the Number of Boats per Month Fishing in the Campbeltown District, 1863-1906.

Year.	Jan.	Feb.	Mar.	Apr.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1863	...	...	...	...	...	230	586	98	23	...	...	...	937
4	...	...	...	...	...	346	415	243	69	2	...	...	1075
5	...	...	...	...	...	364	385	341	6	1	...	...	1097
6	...	...	...	...	...	358	395	324	26	...	...	...	1103
7	...	...	...	...	...	326	334	302	27	...	...	...	989
8	...	...	...	...	...	220	290	159	80	...	...	...	749
9	...	...	...	...	...	212	544	573	285	18	...	...	1632
1870	...	...	...	...	...	227	465	702	541	172	31	...	2138
1	...	...	...	...	...	324	766	1116	488	175	...	...	2869
2	...	...	...	...	...	286	948	1716	864	380	...	...	4194
3	...	...	...	...	...	179	1639	2019	933	334	...	...	5104
4	...	...	...	...	...	291	1375	1232	871	738	132	...	4639
5	...	...	...	...	...	325	555	486	219	14	...	...	1599
6	...	...	...	...	...	430	557	824	781	9	...	...	2601
7	...	...	...	...	...	351	457	545	381	61	...	...	1795
8	...	...	...	...	...	506	740	949	118	...	...	...	2313
9	...	...	...	...	94	660	912	584	643	870	1816	192	5771
1880	...	...	...	...	123	870	1257	747	997	1423	876	565	6858
1	...	...	...	...	...	1190	1249	1866	901	195	368	357	6126
2	...	...	...	...	...	1989	1792	1696	764	462	80	40	6823
3	...	...	...	...	...	1368	1422	1849	748	486	746	132	6751
4	...	...	...	...	...	1084	1866	1152	635	948	487	...	6172
5	...	...	...	...	...	941	1664	1128	915	959	39	4	5650
6	...	...	...	...	...	1021	1350	1146	790	829	866	555	6557
7	...	...	...	...	...	1070	1264	748	913	738	1654	1710	8097
8	...	...	...	...	...	641	1422	1163	835	947	800	1220	7028
9	...	...	...	...	...	527	580	268	128	645	698	705	3551
1890	...	...	...	...	...	911	1207	70	10	878	1066	428	4570
1	...	...	...	...	...	630	1030	233	50	261	117	...	2321
2	...	...	...	...	...	677	827	75	31	282	214	126	2232
3	...	...	...	...	...	927	795	92	...	2	2	22	1840
4	...	...	...	...	...	564	549	816	410	164	6	52	2561
5	...	...	...	...	...	684	953	584	18	52	37	64	2392
6	...	...	...	...	...	650	1009	636	435	231	99	48	3108
7	...	...	...	...	...	384	1053	464	558	232	136	40	2867
8	...	...	...	...	...	813	706	411	909	162	364	422	3787
9	...	...	...	...	...	608	638	803	715	199	208	100	3271
1900	...	...	...	...	...	706	556	794	770	610	474	84	3994
1	...	...	...	...	...	675	600	780	500	470	198	385	3608
2	...	...	...	...	...	710	860	860	560	180	12	134	3316
3	...	...	...	...	...	700	761	730	411	46	92	354	3094
4	...	...	...	...	...	565	550	680	700	170	24	180	2869
5	...	...	...	...	...	574	730	1030	37	100	98	58	2627
6	...	...	...	...	...	486	624	570	28	10	...	4	1722

TABLE XVI.

Showing the Number of Boats per Month Fishing in the Inveraray District, 1854–1906.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1854	...	...	...	...	...	...	2175	2670	350	300	370	...	5865
5	...	...	...	...	...	...	1610	2520	1620	1160	1350	460	8720
6	...	...	...	...	...	...	2200	2220	2120	1280	810	290	8920
7	...	...	...	...	...	...	2315	2290	2180	2050	400	...	9235
8	...	...	...	...	...	...	2170	1890	2440	1800	1400	750	10,450
9	...	...	...	...	...	...	2166	2400	2650	1570	1350	1600	11,736
1860	320	145	225	170	123	1241	2012	2690	2150	1820	2010	711	13,617
1	...	...	...	...	...	1081	2255	2830	2260	2390	1190	1287	13,293
2	...	...	...	...	...	550	2270	2500	2730	3320	2823	1850	16,043
3	...	...	...	...	...	641	1957	2707	2715	3018	1933	821	13,792
4	...	...	...	...	...	1357	2136	1877	2508	1605	471	55	10,009
5	...	...	...	...	...	839	2080	2855	2035	1118	740	18	9685
6	...	...	...	...	...	730	1586	2480	2050	1975	1067	461	10,349
7	180	...	...	...	...	707	1573	1921	1984	1492	609	704	9170
8	580	...	...	...	...	746	1487	1573	1789	1822	169	178	8344
9	184	...	...	...	...	776	1747	1565	1855	1005	30	290	7452
1870	346	...	...	...	...	1090	1415	1522	1885	1434	1334	388	9414
1	160	...	...	...	...	1273	1638	1412	817	762	281	34	6377
2	10	...	...	...	...	661	952	1590	862	412	503	292	5282
3	...	...	...	...	...	548	1023	212	164	315	130	15	2407
4	...	...	...	...	...	455	1019	848	553	290	14	...	3179
5	6	...	...	...	...	359	991	865	578	646	457	251	4153
6	10	...	...	...	...	462	726	904	856	1125	714	70	4867
7	2	...	...	...	...	392	805	1772	1134	1068	277	94	5544
8	...	...	...	...	...	441	590	709	314	42	305	98	2499
9	...	...	...	...	...	403	783	746	626	685	116	...	3359
1880	...	...	...	...	...	405	693	735	895	473	928	438	4567
1	...	...	...	...	...	861	874	784	697	407	658	476	4757
2	...	...	...	...	...	620	1062	909	790	913	1211	56	5561
3	...	...	..	...	...	770	957	1032	801	849	763	45	5217
4	...	...	...	...	...	855	1203	820	737	771	90	...	4476
5	...	...	...	...	...	839	1162	742	636	741	110	...	4230
6	...	...	...	...	...	678	1033	781	755	675	554	55	4531
7	...	...	...	...	532	1180	995	1008	1187	752	608	90	6352
8	...	...	...	...	...	853	963	1028	619	601	600	180	4844
9	...	...	...	...	...	870	895	1012	670	875	750	...	5072
1890	...	...	...	...	..	1106	1154	987	472	1013	716	551	5999
1	...	...	...	...	...	1030	1147	853	848	1280	1170	1310	7638
2	...	...	...	...	...	1050	970	1035	1288	1069	1068	1304	7784
3	...	...	...	...	...	1152	1013	1291	1019	844	1040	721	7080
4	...	...	...	...	...	795	1004	1368	902	545	814	722	6150
5	...	...	...	...	...	807	885	1363	886	141	616	454	5152
6	...	...	...	...	...	738	1176	957	775	799	624	427	5496
7	...	...	...	..	...	667	1044	1147	1513	834	1024	827	7056
8	...	...	...	...	...	876	875	1355	1097	941	752	403	6299
9	...	...	...	...	...	702	777	1030	405	643	1150	540	5247
1900	...	...	...	...	...	875	784	940	620	610	910	470	5209
1	...	...	...	...	...	860	800	1010	870	690	540	570	5340
2	...	...	...	...	...	660	1005	750	860	720	580	720	5295
3	...	...	...	...	...	670	951	745	915	830	520	750	5381
4	...	...	...	...	345	930	780	720	710	500	220	750	4955
5	...	...	...	...	420	700	565	390	300	380	400	360	3515
6	...	...	...	...	450	440	500	320	160	442	60	12	2384

TABLE XVII.

Showing the Number of Boats per Month Fishing in the Inveraray and Campbeltown Districts, 1854–1906.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1854	...	...	..	...	...	...	2175	2670	350	300	370	...	5865
5	...	...	...	...	...	...	1610	2520	1620	1160	1350	460	8720
6	...	...	...	...	...	...	2200	2220	2120	1280	810	290	8920
7	...	...	...	...	...	...	2315	2290	2180	2050	400	...	9235
8	...	...	...	...	...	...	2170	1890	2440	1800	1400	750	10,450
9	...	...	...	...	...	...	2166	2400	2650	1570	1350	1600	11,736
1860	320	145	225	170	123	1241	2012	2690	2150	1820	2010	711	13,617
1	...	...	...	...	...	1081	2255	2830	2260	2390	1190	1287	13,293
2	...	...	...	...	...	550	2270	2500	2730	3320	2823	1850	16,043
3	...	...	...	...	...	871	2543	2805	2738	3018	1933	821	14,729
4	...	...	...	...	...	1703	2551	2120	2577	1607	471	55	11,084
5	...	...	...	..	...	1203	2465	3196	2041	1119	740	18	10,782
6	...	...	...	...	...	1088	1981	2804	2076	1975	1067	461	11,452
7	180	...	...	...	...	1033	1907	2223	2011	1492	609	704	10,159
8	580	...	...	...	...	966	1777	1732	1869	1822	169	178	9093
9	184	...	...	...	...	988	2291	2138	2140	1023	30	290	9084
1870	346	...	...	...	...	1317	1880	2224	2426	1606	1365	388	11,552
1	160	...	...	...	...	1597	2404	2528	1305	937	281	34	9246
2	10	...	...	...	...	947	1900	3306	1726	792	503	292	9476
3	...	...	...	...	...	727	2662	2231	1097	649	130	15	7511
4	...	...	...	...	...	746	2394	2080	1424	1028	146	...	7818
5	6	...	...	...	...	684	1546	1351	797	660	457	251	5752
6	10	...	...	...	...	892	1283	1728	1637	1134	714	70	7468
7	2	...	...	...	...	743	1262	2317	1515	1129	277	94	7339
8	...	...	...	...	...	947	1330	1658	432	42	305	98	4812
9	...	...	...	...	94	1063	1695	1330	1269	1555	1932	192	9130
1880	...	...	...	...	123	1275	1950	1482	1892	1896	1804	1003	11,425
1	...	...	...	...	...	2051	2123	2650	1598	602	1026	833	10,883
2	...	...	...	...	...	2609	2854	2605	1554	1375	1291	96	12,384
3	..	...	...	...	...	2138	2379	2881	1549	1335	1509	177	11,968
4	...	...	...	...	...	1939	3069	1972	1372	1719	577	...	10,648
5	...	...	...	...	...	1780	2826	1870	1551	1700	149	4	9880
6	...	...	...	...	...	1699	2383	1927	1545	1504	1420	610	11,088
7	...	...	...	...	532	2250	2259	1756	2100	1490	2262	1800	14,449
8	...	...	...	...	...	1494	2385	2191	1454	1548	1400	1400	11,872
9	...	...	...	...	...	1397	1475	1280	798	1520	1448	705	8623
1890	...	...	...	...	...	2017	2361	1057	482	1891	1782	979	10,569
1	...	...	...	...	...	1660	2177	1086	898	1541	1287	1310	9959
2	...	...	...	...	...	1727	1797	1110	1319	1351	1282	1430	10,016
3	...	...	...	...	...	2079	1808	1383	1019	846	1042	743	8920
4	...	...	...	...	...	1359	1553	2184	1312	709	820	774	8711
5	...	...	...	...	...	1491	1838	1947	904	193	653	518	7544
6	...	...	...	...	...	1388	2185	1593	1210	1030	723	475	8604
7	...	...	...	...	...	1051	2097	1611	2071	1066	1160	867	9923
8	...	...	...	...	...	1689	1581	1766	2006	1103	1116	825	10,086
9	...	...	...	...	...	1310	1415	1833	1120	842	1358	640	8518
1900	...	...	...	...	...	1581	1340	1734	1390	1220	1384	554	9203
1	...	...	...	...	...	1535	1400	1790	1370	1160	738	955	8948
2	...	...	...	...	...	1370	1865	1610	1420	900	592	854	8611
3	...	...	...	...	...	1370	1612	1475	1326	876	612	1114	8385
4	...	...	...	...	345	1495	1330	1400	1410	670	244	930	7824
5	...	...	...	...	420	1274	1295	1420	337	480	498	418	6142
6	...	...	...	...	450	926	1124	890	188	452	60	16	4106

TABLE XVIII.

Showing the Number of Boats per Month Fishing in the Greenock District, 1855-1906.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1855	...	...	...	...	...	121	481	140	...	...	...	...	742
6	...	...	...	...	...	216	147	28	...	...	...	...	391
7	...	...	...	...	...	208	439	57	4	...	...	...	708
8	...	...	...	...	...	210	378	100	...	...	...	...	688
9	...	...	...	...	...	223	463	123	...	...	...	...	809
1860	...	..	...	...	...	289	499	493	196	26	...	...	1503
1	...	...	...	...	...	121	433	181	...	...	...	...	735
2	...	...	...	...	...	257	612	587	401	63	...	...	1920
3	...	...	...	...	...	134	256	136	18	6	...	...	550
4	...	...	...	...	...	76	184	182	57	15	80	30	624
5	...	...	...	...	...	84	176	265	33	16	199	139	912
6	65	...	...	...	...	106	278	283	16	18	147	81	994
7	92	...	...	...	...	90	157	198	99	26	16	23	701
8	...	...	...	...	...	...	166	127	72	228	1160	1032	2785
9	70	...	...	...	...	80	252	223	368	1234	850	201	3278
1870	30	...	...	...	...	202	236	235	212	144	60	130	1249
1	...	...	...	...	...	151	184	120	24	26	218	70	793
2	...	...	...	...	...	...	90	114	33	52	8	...	297
3	...	...	...	...	...	67	255	79	25	70	47	...	543
4	...	...	...	...	...	88	181	114	108	...	...	...	491
5	...	...	...	...	...	69	103	47	...	...	...	. .	219
6	...	...	...	...	...	78	161	184	59	2	...	...	484
7	...	...	...	...	...	110	154	174	47	6	...	...	491
8	...	...	...	...	...	123	97	106	3	...	...	...	329
9	...	...	...	...	...	...	237	174	94	18	...	...	523
1880	...	...	...	...	...	70	260	145	23	...	...	...	498
1	...	...	...	...	...	...	166	121	23	...	...	...	310
2	...	...	...	...	...	99	128	182	119	8	...	...	536
3	...	...	...	...	...	34	108	97	53	...	...	...	292
4	..	...	...	...	...	50	201	152	94	...	...	...	497
5	...	...	...	...	...	88	177	161	63	...	...	...	489
6	...	...	...	...	...	...	207	169	17	...	...	...	393
7	...	...	...	...	...	24	144	202	89	...	...	...	459
8	...	...	...	...	...	131	279	235	60	...	...	...	705
9	...	...	...	...	...	284	285	198	9	...	...	...	776
1890	...	...	...	...	23	167	264	128	6	..	...	...	588
1	...	...	...	...	33	278	437	172	13	...	...	...	933
2	...	...	...	...	...	301	219	109	...	...	...	...	629
3	...	...	...	...	...	230	252	150	23	...	...	...	655
4	...	...	...	...	...	113	190	140	...	...	...	...	443
5	...	...	...	...	...	247	228	166	9	...	...	...	650
6	...	...	...	...	...	130	164	47	...	...	...	...	341
7	...	...	...	...	...	67	175	121	23	...	...	...	386
8	...	...	...	...	...	72	62	47	11	...	...	...	192
9	...	...	...	...	...	54	39	106	38	3	...	...	240
1900	...	...	...	...	...	60	35	21	9	2	...	...	127
1	...	...	...	...	...	46	48	54	10	3	...	..	161
2	...	...	...	...	...	45	49	9	270	...	...	...	373
3	...	...	...	...	...	...	45	27	7	...	...	...	79
4	...	..	...	...	...	...	42	48	29	...	...	...	119
5	...	...	...	...	...	...	24	38	157	236	110	...	565
6	...	...	...	...	...	...	36	80	62	22	291	288	779

TABLE XIX.

Showing the Number of Boats per Month Fishing in the Rothesay District 1854-1906.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1854	...	...	...	...	...	...	202	75	...	...	...	...	277
5	...	...	...	...	...	70	324	285	...	...	...	...	679
6	...	...	...	...	...	60	290	320	150	78	...	...	898
7	...	...	...	...	...	25	284	156	260	140	...	...	865
8	...	...	...	...	...	...	380	730	510	...	...	...	1620
9	...	...	...	...	...	...	340	360	...	...	181	...	881
1860	...	...	...	...	...	...	270	1095	950	840	442	230	3827
1	...	...	...	...	...	63	530	510	50	930	500	60	2643
2	...	...	...	...	...	...	222	414	139	...	10	4	789
3	...	...	...	...	...	17	272	202	101	278	325	625	1820
4	...	...	...	...	...	...	598	731	395	663	1340	1490	5217
5	...	...	...	...	...	14	430	1138	1195	1570	1590	1900	7837
6	780	...	...	...	...	...	260	569	200	604	2100	1360	5873
7	710	...	...	...	...	...	...	292	143	825	413	700	3083
8	418	...	...	...	...	...	63	107	129	395	12	492	1616
9	768	...	...	...	...	178	...	160	448	790	1193	1700	5237
1870	800	...	...	...	...	...	225	384	710	490	715	1360	4684
1	660	...	...	...	...	136	281	932	550	86	848	1070	4563
2	550	...	...	...	...	...	95	625	530	1095	1275	900	5070
3	270	...	...	...	...	90	460	321	422	269	50	...	1882
4	...	...	...	...	...	...	289	541	396	222	40	...	1488
5	...	...	...	...	...	...	424	264	120	141	146	...	1095
6	...	...	...	...	...	...	241	372	512	223	393	5	1746
7	...	...	...	...	...	18	210	400	168	151	127	...	1074
8	...	...	...	...	...	...	209	336	43	...	43	8	639
9	...	...	...	...	...	65	446	387	167	422	468	37	1992
1880	...	...	...	...	...	75	709	484	248	268	527	138	2449
1	...	...	...	...	...	...	197	257	15	...	43	28	540
2	...	...	...	...	...	...	384	197	72	341	538	18	1550
3	...	...	...	...	...	...	176	130	34	158	276	65	839
4	...	...	...	...	...	...	406	360	186	428	275	44	1699
5	...	...	...	...	...	140	497	212	342	645	285	151	2272
6	...	...	...	...	...	...	369	320	107	859	435	180	2270
7	...	...	...	...	...	...	500	849	343	630	400	132	2854
8	...	...	...	...	...	105	453	661	284	232	119	40	1894
9	...	...	...	..	...	125	435	619	387	574	160	20	2320
1890	...	...	...	...	...	42	652	595	325	258	154	75	2101
1	...	...	...	...	...	110	507	335	196	171	218	55	1592
2	...	...	...	...	...	224	399	255	139	107	75	20	1219
3	...	...	...	...	...	323	295	200	91	54	54	...	1017
4	...	...	...	...	...	105	240	171	37	62	24	5	644
5	...	...	...	...	...	274	374	307	94	36	12	...	1097
6	...	...	...	...	...	75	276	119	59	81	18	...	628
7	...	..	...	...	...	50	264	168	176	104	50	6	818
8	...	...	...	...	...	105	162	162	122	59	64	...	674
9	...	...	...	...	...	78	110	129	81	83	85	...	566
1900	...	...	...	...	...	47	105	106	101	26	...	...	385
1	...	...	...	...	...	11	94	107	66	14	...	...	292
2	...	...	...	...	...	18	110	136	54	349	593	637	1897
3	442	40	...	...	...	9	107	72	400	442	513	558	2583
4	...	...	...	...	...	7	73	80	509	198	46	399	1312
5	...	...	...	...	...	10	59	160	7	31	16	13	296
6	...	...	...	...	...	22	77	560	837	1003	19	41	2559

TABLE XX.

Showing the Number of Boats Fishing per Month in the whole Clyde Area, 1854-1906.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1854	...	...	...	...	...	...	2377	2745	350	300	370	...	6142
5	...	...	...	...	...	191	2415	2945	1620	1160	1350	460	10,141
6	...	...	...	...	...	276	2637	2568	2270	1358	810	290	10,209
7	...	...	...	...	...	233	3038	2503	2444	2190	400	...	10,808
8	...	...	...	...	...	210	2928	2720	2950	1800	1400	750	12,758
9	...	...	...	...	...	223	2969	2883	2650	1570	1531	1600	13,426
1860	320	145	225	170	123	1530	2781	4278	3296	2686	2452	941	18,947
1	...	...	...	...	...	1265	3218	3521	2310	3320	1690	1347	16,671
2	..	...	...	...	...	807	3104	3501	3270	3383	2833	1854	18,752
3	...	...	...	...	...	1308	3396	3279	2860	3302	2258	1446	17,849
4	...	...	...	...	...	2134	3617	3132	3042	2290	1910	1578	17,703
5	...	...	...	...	...	1528	3272	4784	3275	2705	2630	2172	20,366
6	848	...	...	...	...	396	2738	3797	2298	2599	3453	1930	19,059
7	1029	...	.	...	..	1314	2288	2912	2256	2343	1048	1429	14,619
8	1014	...	...	...	...	966	2154	2108	2113	2470	1353	1712	13,890
9	1030	...	...	...	...	1452	2862	2695	2975	3075	2078	2197	18,364
1870	1213	...	...	...	48	1851	2610	2931	3363	2253	2163	1883	18,315
1	842	...	...	...	116	2304	3107	3603	1884	1057	1351	1175	15,439
2	560	...	...	...	...	1194	2302	4202	2289	1943	1791	1192	15,473
3	270	...	...	...	26	1115	3713	2730	1561	993	243	15	10,666
4	...	...	...	...	57	1101	3168	2844	1930	1250	186	..	10,536
5	6	...	...	...	84	917	2282	1804	935	801	603	251	7683
6	10	...	...	...	150	1324	1947	2442	2218	1376	1107	75	10,649
7	2	...	...	...	237	1134	1864	3004	1730	1288	404	94	9757
8	386	692	577	15	183	1397	1833	2100	478	42	358	127	8188
9	838	961	711	57	268	1440	2573	2089	1580	2058	2415	663	15,653
1880	983	1004	647	10	230	1867	3462	2304	2221	2234	2809	1442	19,213
1	1200	1202	606	...	...	2534	2854	3204	1636	602	1155	1134	16,127
2	754	1227	433	...	178	3411	3550	3035	1785	1769	1850	300	18,292
3	856	812	555	...	322	2725	3004	3233	1677	1493	1787	404	16,868
4	599	979	423	40	357	2500	4052	2651	1683	2163	886	126	16,459
5	312	1029	755	...	189	2506	3965	2422	1970	2345	434	193	16,120
6	201	764	764	...	24	1956	3460	2658	1726	2445	1891	838	16,727
7	94	254	307	...	539	2591	3186	2977	2566	2127	2719	1978	19,338
8	121	137	170	...	97	2015	3379	3258	1806	1823	1519	1586	15,911
9	178	372	54	...	101	2101	2439	2209	1194	2094	1650	921	13,313
1890	129	451	174	...	147	2409	3598	1862	813	2149	2010	1556	15,298
1	333	665	...	...	173	2349	3429	1657	1125	1736	1712	1680	14,859
2	...	118	99	16	114	2639	2703	1490	1458	1458	1357	1484	12,936
3	6	132	5	..	110	2895	2524	1770	1133	900	1096	743	11,314
4	...	3	40	...	100	1884	2277	2620	1371	773	844	779	10,691
5	...	51	119	...	141	2311	2710	2572	1007	229	665	518	10,323
6	...	9	23	...	92	1849	2853	1799	1284	1171	741	475	10,296
7	...	21	51	...	...	1242	2812	1979	2320	1221	1210	873	11,729
8	...	...	...	...	...	2106	2007	1975	2139	1162	1180	825	11,394
9	...	...	...	...	58	1685	1694	2225	1286	995	1491	640	10,074
1900	...	77	132	...	48	1873	1614	1948	1517	1278	1397	560	10,444
1	...	336	146	...	71	1752	1667	2013	1480	1177	738	955	10,335
2	248	407	198	...	63	1540	2204	1832	1744	1249	1185	1491	12,161
3	559	141	38	...	52	1494	2047	1580	1777	1339	1125	1662	11,814
4	46	136	63	...	345	1623	1588	1598	1971	868	290	1329	9857
5	...	...	...	...	420	1430	1498	1774	547	747	624	431	7471
6	...	80	45	...	450	1081	1373	1672	1155	1477	554	732	8619

TABLE XXI.

Yearly Table of Boats Fishing in the whole Clyde Area, 1854-1906.

Year.	Ballantrae.	Campbeltown.	Inveraray.	Greenock.	Rothesay.	Total.
1854 ...	...	...	5,865	...	277	6,142
5 ...	...	...	8,720	742	679	10,141
6 ...	...	...	8,920	391	898	10,209
7 ...	...	...	9,235	708	865	10,808
8 ...	...	...	10,450	688	1,620	12,758
9 ...	...	...	11,736	809	881	13,426
1860 ...	...	...	13,617	1,503	3,827	18,947
1 ...	...	...	13,293	735	2,643	16,671
2 ...	...	...	16,043	1,920	789	18,752
3 ...	750	937	13,792	550	1,820	17,849
4 ...	778	1,075	10,009	624	5,217	17,703
5 ...	835	1,097	9,685	912	7,837	20,366
6 ...	740	1,103	10,349	994	5,873	19,059
7 ...	676	989	9,170	701	3,083	14,619
8 ...	396	749	8,344	2,785	1,616	13,890
9 ...	765	1,632	7,452	3,278	5,237	18,364
1870 ...	830	2,138	9,414	1,249	4,684	18,315
1 ...	837	2,869	6,377	793	4,563	15,439
2 ...	630	4,194	5,282	297	5,070	15,473
3 ...	730	5,104	2,407	543	1,882	10,666
4 ...	739	4,639	3,179	491	1,488	10,536
5 ...	617	1,599	4,153	219	1,095	7,683
6 ...	951	2,601	4,867	484	1,746	10,649
7 ...	853	1,795	5,544	491	1,074	9,757
8 ...	2,408	2,313	2,499	329	639	8,188
9 ...	4,008	5,771	3,359	523	1,992	15,653
1880 ...	4,841	6,858	4,567	498	2,449	19,213
1 ...	4,394	6,126	4,757	310	540	16,127
2 ...	3,822	6,823	5,561	536	1,550	18,292
3 ...	3,769	6,751	5,217	292	839	16,868
4 ...	3,615	6,172	4,476	497	1,699	16,459
5 ...	3,479	5,650	4,230	489	2,272	16,120
6 ...	2,976	6,557	4,531	393	2,270	16,727
7 ...	1,576	8,097	6,352	459	2,854	19,338
8 ...	1,440	7,028	4,844	705	1,894	15,911
9 ...	1,594	3,551	5,072	776	2,320	13,313
1890 ...	2,040	4,570	5,999	588	2,101	15,298
1 ..	2,375	2,321	7,638	933	1,592	14,859
2 ...	1,072	2,232	7,784	629	1,219	12,936
3 ...	722	1,840	7,080	655	1,017	11,314
4 ...	893	2,561	6,150	443	644	10,691
5 ...	1,032	2,392	5,152	650	1,097	10,323
6 ...	723	3,108	5,496	341	628	10,296
7 ...	602	2,867	7,056	386	818	11,729
8 ...	442	3,787	6,299	192	674	11,394
9 ...	750	3,271	5,247	240	566	10,074
1900 ...	729	3,994	5,209	127	385	10,444
1 ...	934	3,608	5,340	161	292	10,335
2 ...	1,280	3,316	5,295	373	1,897	12,161
3 ...	677	3,094	5,381	79	2,583	11,814
4 ...	602	2,869	4,955	119	1,312	9,857
5 ...	468	2,627	3,515	565	296	7,471
6 ...	1,175	1,722	2,384	779	2,559	8,619

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854–1906.

Week ended		Ballan-trae.		Campbel-town.		Inver-aray.		Green-ock.		Rothe-say.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1854.													
July	1	.	.	.	.	400	800	.	.	.	.	400	800
,,	8	.	.	.	.	450	700	.	.	.	.	450	700
,,	15	.	.	.	.	460	1000	.	.	12	15	472	1015
,,	22	.	.	.	.	465	1000	.	.	100	135	565	1135
,,	29	.	.	.	.	400	1500	.	.	90	150	490	1650
Aug.	5	.	.	.	.	500	700	.	.	50	20	550	720
,,	12	.	.	.	.	550	800	.	.	20	80	570	880
,,	19	.	.	.	.	540	1500	.	.	5	50	545	1550
,,	26	.	.	.	.	540	2000	.	.	?	20	540	2020
Sept.	2	.	.	.	.	540	1200	.	.	?	10	540	1210
,,	9	.	.	.	.	350	800	.	.	.	.	350	800
,,	16	.	.	.	.	.	.	.	.	.	.	.	.
,,	23	.	.	.	.	.	.	.	.	.	.	.	.
,,	30	.	.	.	.	.	.	.	.	.	.	.	.
Oct.	7	.	.	.	.	.	.	.	.	.	.	.	.
,,	14	.	.	.	.	.	.	.	.	.	.	.	.
,,	21	.	.	.	.	.	.	.	.	.	.	.	.
,,	28	.	.	.	.	300	2400	.	.	.	.	300	2400
Nov.	4	.	.	.	.	.	.	.	.	.	.	.	.
,,	11	.	.	.	.	150	500	.	.	.	.	150	500
,,	18	.	.	.	.	.	.	.	.	.	.	.	.
,,	25	.	.	.	.	140	1100	.	.	.	.	140	1100
Dec.	2	.	.	.	.	80	600	.	.	.	.	80	600
1855.													
To June	16	.	.	.	.	?	1326	.	.	.	.	.	.
June	23	.	.	.	.	340	830	?	1391	* .	.	340	830
,,	30	.	.	.	.	390	1473	121	413	70	1800	581	3686
July	7	.	.	.	.	425	2065	121	808	90	600	636	3473
,,	14	.	.	.	.	380	1674	120	445	90	600	590	2719
,,	21	.	.	.	.	380	1275	120	307	90	300	590	1882
,,	28	.	.	.	.	425	707	120	70	54	100	599	877
Aug.	4	.	.	.	.	480	1650	70	36	50	80	600	1766
,,	11	.	.	.	.	500	2000	40	50	45	110	585	2160
,,	18	.	.	.	.	500	3000	30	80	70	210	600	3290
,,	25	.	.	.	.	520	1800	.	.	70	200	590	2000
Sept.	1	.	.	.	.	520	2200	.	.	50	100	570	2300
,,	8	.	.	.	.	520	1000	.	.	.	.	520	1000
,,	15	.	.	.	.	400	200	.	.	.	.	400	200
,,	22	.	.	.	.	300	200	.	.	.	.	300	200
,,	29	.	.	.	.	400	600	.	.	.	.	400	600

* Up to June 23rd.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballan-trae.		Campbel-town.		Inver-aray.		Green-ock.		Rothe-say.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans.
1855.												
Oct. 6 .	.	.	.	.	300	500	.	.	.	.	300	500
,, 13 .	.	.	.	.	300	600	.	.	.	.	300	600
,, 20 .	.	.	.	.	300	2500	.	.	.	.	300	2500
,, 27 .	.	.	.	.	260	380	.	.	.	.	260	380
Nov. 3 .	.	.	.	.	280	500	.	.	.	.	280	500
,, 10 .	.	.	.	.	320	1544	.	.	.	.	320	1544
,, 17 .	.	.	.	.	300	1700	.	.	.	.	300	1700
,, 24 .	.	.	.	.	220	150	.	.	.	.	220	150
Dec. 1 .	.	.	.	.	230	430	.	.	.	.	230	430
,, 8 .	.	.	.	.	200	250	.	.	.	.	200	250
,, 15 .	.	.	.	.	180	295	.	.	.	.	180	295
,, 22 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 29 .	.	.	.	.	80	324	.	.	.	.	80	324
1856.												
1 Jan.--14 June	.	.	.	.	?	1178	?	70	.	.	.	.
June 21 .	.	.	.	.	280	590	111	117	.	.	391	707
,, 28 .	.	.	.	.	320	650	105	103	60	500	485	1253
July 5 .	.	.	.	.	400	1466	69	60	60	100	520	1626
,, 12 .	.	.	.	.	420	2106	27	40	35	50	482	2196
,, 19 .	.	.	.	.	420	1500	20	20	40	60	480	1580
,, 26 .	.	.	.	.	460	2710	20	50	70	350	550	3110
Aug. 2 .	.	.	.	.	500	3000	20	40	85	440	605	3480
,, 9 .	.	.	.	.	500	3500	18	10	85	350	603	3860
,, 16 .	.	.	.	.	560	3300	10	.	85	400	655	3700
,, 23 .	.	.	.	.	580	3000	.	.	80	250	660	3250
,, 30 .	.	.	.	.	580	1500	.	.	70	100	650	1600
Sept. 6 .	.	.	.	.	570	2200	.	.	55	100	625	2300
,, 13 .	.	.	.	.	570	3000	.	.	30	60	600	3060
,, 20 .	.	.	.	.	500	1500	.	.	20	10	520	1510
,, 27 .	.	.	.	.	480	1500	.	.	45	130	525	1630
Oct. 4 .	.	.	.	.	440	1000	.	.	38	100	478	1100
,, 11 .	.	.	.	.	440	1300	.	.	20	40	460	1340
,, 18 .	.	.	.	.	.	.	.	.	20	35	20	35
,, 25 .	.	.	.	.	.	.	.	.	.	.	.	.
Nov. 1 .	.	.	.	.	400	4200	.	.	.	.	400	4200
,, 8 .	.	.	.	.	400	2360	.	.	.	.	400	2360
,, 15 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 22 .	.	.	.	.	250	240	.	.	.	.	250	240
,, 29 .	.	.	.	.	160	150	.	.	.	.	160	150
Dec. 6 .	.	.	.	.	100	270	.	.	.	.	100	270
,, 13 .	.	.	.	.	70	160	.	.	.	.	70	160
,, 20 .	.	.	.	.	80	160	.	.	.	.	80	160
,, 27 .	.	.	.	.	40	70	.	.	.	.	40	70
1857.												
To June 13 .	.	.	.	.	?	1716	?	15	.	.	.	.
June 20 .	.	.	.	.	200	84	83	35	.	.	283	119
,, 27 .	.	.	.	.	280	800	125	140	25	150	430	1090

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1857.												
July 4	.	.	.	.	375	1060	139	180	50	150	564	1390
,, 11	.	.	.	.	480	1380	70	70	60	835	610	2285
,, 18	.	.	.	.	480	1410	90	140	60	65	630	1615
,, 25	.	.	.	.	480	1950	76	100	60	180	616	2230
Aug. 1	.	.	.	.	500	3000	64	50	54	120	618	3170
,, 8	.	.	.	.	530	800	29	30	54	80	613	910
,, 15	.	.	.	.	580	1000	10	10	34	40	624	1050
,, 22	.	.	.	.	580	2500	10	10	34	40	624	2550
,, 29	.	.	.	.	600	1300	8	10	34	40	642	1350
Sept. 5	.	.	.	.	600	1000	4	10	40	80	644	1090
,, 12	.	.	.	.	540	600	.	.	80	220	620	820
,, 19	.	.	.	.	540	400	.	.	80	80	620	480
,, 26	.	.	.	.	500	600	.	.	60	60	560	660
Oct. 3	.	.	.	.	450	700	.	.	70	180	520	880
,, 10	.	.	.	.	400	800	.	.	35	80	435	880
,, 17	.	.	.	.	400	1200	.	.	35	100	435	1300
,, 24	.	.	.	.	400	700	.	.	.	.	400	700
,, 31	.	.	.	.	400	400	.	.	.	.	400	400
Nov. 7	.	.	.	.	.	.	.	.	.	.	.	.
,, 14	.	.	.	.	.	.	.	.	.	.	.	.
,, 21	.	.	.	.	300	1000	.	.	.	.	300	1000
,, 28	.	.	.	.	100	200	.	.	.	.	100	200
1858.												
To June 5	.	.	.	.	.	.	?	*7	?	†500	.	.
June 12	.	.	.	.	.	.	73	13	.	.	73	13
,, 19	.	.	.	.	.	.	62	10	.	.	62	10
,, 26	.	.	.	.	?	*3000	75	60	.	.	75	60
July 3	.	.	.	.	300	400	51	53	.	.	351	453
,, 10	.	.	.	.	450	600	59	134	30	300	539	1034
,, 17	.	.	.	.	460	450	96	900	100	25	656	1375
,, 24	.	.	.	.	480	1100	119	50	100	175	699	1325
,, 31	.	.	.	.	480	2050	53	750	150	300	683	3100
Aug. 7	.	.	.	.	450	1200	37	430	150	300	637	1543
,, 14	.	.	.	.	480	1400	25	10	200	350	705	1760
,, 21	.	.	.	.	480	1500	29	40	200	250	709	1790
,, 28	.	.	.	.	480	950	9	15	180	180	669	1145
Sept. 4	.	.	.	.	520	1000	.	.	170	20	690	1020
,, 11	.	.	.	.	520	1950	.	.	160	100	680	2050
,, 18	.	.	.	.	500	800	.	.	100	60	600	860
,, 25	.	.	.	.	500	900	.	.	80	20	580	920
Oct. 2	.	.	.	.	400	800	.	.	.	.	400	800
,, 9	.	.	.	.	400	300	.	.	.	.	400	300
,, 16	.	.	.	.	400	1030	.	.	.	.	400	1030
,, 23	.	.	.	.	500	720	.	.	.	.	500	720
,, 30	.	.	.	.	500	950	.	.	.	.	500	950

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* From 1st January.

† For January and February.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1858.												
Nov. 6	.	.	.	.	500	1100	.	.	.	.	500	1100
,, 13	.	.	.	.	300	600	.	.	.	.	300	600
,, 20	.	.	.	.	300	350	.	.	.	.	300	350
,, 27	.	.	.	.	300	400	.	.	.	.	300	400
Dec. 4	.	.	.	.	250	450	.	.	.	.	250	450
,, 11	.	.	.	.	200	300	.	.	.	.	200	300
,, 18	.	.	.	.	100	550	.	.	.	.	100	550
,, 25	.	.	.	.	100	100	.	.	.	.	100	100
,, 31	.	.	.	.	100	1000	.	.	.	.	100	1000
1859.												
To June 11	.	.	.	.	?	*3209	.	.	.	.	.	.
June 18	.	.	.	.	220	196	?	*52	.	.	220	196
,, 25	.	.	.	.	290	190	97	335	.	.	387	525
July 2	.	.	.	.	300	450	126	263	.	.	426	713
,, 9	.	.	.	.	500	1643	127	420	60	160	687	2223
,, 16	.	.	.	.	480	1800	135	255	100	140	715	2195
,, 23	.	.	.	.	586	1405	123	195	100	100	809	1700
,, 30	.	.	.	.	600	1207	78	80	80	40	758	1327
Aug. 6	.	.	.	.	600	1125	50	.	80	60	730	1185
,, 13	.	.	.	.	600	800	33	25	80	100	713	925
,, 20	.	.	.	.	600	510	28	15	100	20	728	545
,, 27	.	.	.	.	600	315	12	10	100	50	712	375
Sept. 3	.	.	.	.	600	400	.	.	.	.	600	400
,, 10	.	.	.	.	600	780	.	.	.	.	600	780
,, 17	.	.	.	.	600	800	.	.	.	.	600	800
,, 24	.	.	.	.	450	620	.	.	.	.	450	620
Oct. 1	.	.	.	.	400	180	.	.	.	.	400	180
,, 8	.	.	.	.	400	470	.	.	.	.	400	470
,, 15	.	.	.	.	400	624	.	.	.	.	400	624
,, 22	.	.	.	.	380	566	.	.	.	.	380	566
,, 29	.	.	.	.	390	84	.	.	.	.	390	84
Nov. 5	.	.	.	.	300	200	.	.	21	60	321	260
,, 12	.	.	.	.	340	100	.	.	60	150	400	250
,, 19	.	.	.	.	310	369	.	.	50	140	360	509
,, 26	.	.	.	.	400	3900	.	.	50	200	450	4100
Dec. 3	.	.	.	.	400	2900	.	.	.	.	400	2900
,, 10	.	.	.	.	150	100	.	.	.	.	150	100
,, 17	.	.	.	.	500	2000	.	.	.	.	500	2000
,, 24	.	.	.	.	300	3000	.	.	.	.	300	3000
,, 31	.	.	.	.	250	452	.	.	.	.	250	452
1860.												
Jan. 7	.	.	.	.	100	300	.	.	.	.	100	300
,, 14	.	.	.	.	90	470	.	.	.	.	90	470
,, 21	.	.	.	.	80	.	.	.	.	.	80	.
,, 28	.	.	.	.	50	10	.	.	.	.	50	10

* From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1860.													
Feb.	4	.	.	.	.	35	15	.	.	.	.	35	15
,,	11	.	.	.	.	30	23	.	.	.	.	30	23
,,	18	.	.	.	.	30	181	.	.	.	.	30	181
,,	25	.	.	.	.	50	505	.	.	.	.	50	505
March	3	.	.	.	.	30	270	.	.	.	.	30	270
,,	10	.	.	.	.	40	366	.	.	.	.	40	366
,,	17	.	.	.	.	35	195	.	.	.	.	35	195
,,	24	.	.	.	.	60	630	.	.	.	.	60	630
,,	31	.	.	.	.	60	294	.	.	.	.	60	294
April	7	.	.	.	.	50	116	.	.	.	.	50	116
,,	14	.	.	.	.	50	152	.	.	.	.	50	152
,,	21	.	.	.	.	40	75	.	.	.	.	40	75
,,	28	.	.	.	.	30	45	.	.	.	.	30	45
May	5	.	.	.	.	30	141	.	.	.	.	30	141
,,	12	.	.	.	.	20	.	.	.	.	.	20	.
,,	19	.	.	.	.	16	24	.	.	.	.	16	24
,,	26	.	.	.	.	22	60	.	.	.	.	22	60
June	2	.	.	.	.	35	42	.	.	.	.	35	42
,,	9	.	.	.	.	95	68	?	*17	.	.	95	68
,,	16	.	.	.	.	238	188	86	88	.	.	324	276
,,	23	.	.	.	.	458	480	92	50	.	.	550	530
,,	30	.	.	.	.	450	320	111	65	.	.	561	385
July	7	.	.	.	.	442	473	113	80	.	.	555	553
,,	14	.	.	.	.	470	807	132	100	100	50	702	957
,,	21	.	.	.	.	550	947	131	210	60	30	741	1187
,,	28	.	.	.	.	550	999	123	110	110	160	783	1269
Aug.	4	.	.	.	.	550	680	115	380	175	460	840	1520
,,	11	.	.	.	.	540	500	129	400	180	480	849	1380
,,	18	.	.	.	.	500	600	118	320	210	520	828	1440
,,	25	.	.	.	.	550	2400	78	280	280	840	908	3520
Sept.	1	.	.	.	.	550	450	53	270	250	770	853	1490
,,	8	.	.	.	.	550	1300	55	140	260	590	865	2030
,,	15	.	.	.	.	500	320	54	80	230	570	784	970
,,	22	.	.	.	.	550	950	45	70	230	530	825	1550
,,	29	.	.	.	.	550	2300	42	240	230	300	822	2840
ct.	6	.	.	.	.	560	800	26	50	240	400	826	1250
,,	13	.	.	.	.	460	1100	.	.	200	500	660	1600
,,	20	.	.	.	.	410	1500	.	.	200	600	610	2100
,,	27	.	.	.	.	390	1720	.	.	200	700	590	2420
Nov.	3	.	.	.	.	420	2600	.	.	170	300	590	2900
,,	10	.	.	.	.	430	4500	.	.	100	150	530	4650
,,	17	.	.	.	.	400	1930	.	.	100	50	500	1980
,,	24	.	.	.	.	380	1320	.	.	60	60	440	1380

* From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	ts	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1860.												
Dec. 1 .	.	.	.	.	380	110	.	.	12	60	392	170
,, 8 .	.	.	.	.	208	1950	.	.	100	350	308	2300
,, 15 .	.	.	.	.	228	2450	.	.	130	500	358	2950
,, 22 .	.	.	.	.	190	2430	.	.	.	.	190	2430
,, 29 .	.	.	.	.	85	660	.	.	.	.	85	660
1861.												
June 8 .	.	.	.	.	172	132	.	.	6	.	178	132
,, 15 .	.	.	.	.	195	97	.	.	15	½	210	97½
,, 22 .	.	.	.	.	260	12	?	*50	12	½	272	12½
,, 29 .	.	.	.	.	454	161	121	45	30	9	605	215
July 6 .	.	.	.	.	495	432	115	25	80	41	690	498
,, 13 .	.	.	.	.	560	690	110	80	150	40	820	810
,, 20 .	.	.	.	.	600	764	93	80	150	100	843	944
,, 27 .	.	.	.	.	600	1019	115	350	150	350	865	1719
Aug. 3 .	.	.	.	.	570	808	105	50	110	70	785	928
,, 10 .	.	.	.	.	565	1335	46	50	90	30	701	1370
,, 17 .	.	.	.	.	565	1980	14	15	100	70	679	2065
,, 24 .	.	.	.	.	565	400	8	20	90	110	663	530
,, 31 .	.	.	.	.	565	800	8	5	120	180	693	985
Sept. 7 .	.	.	.	.	515	890	.	.	.	.	515	890
,, 14 .	.	.	.	.	515	890	.	.	.	.	515	890
,, 21 .	.	.	.	.	615	1215	.	.	.	.	615	1215
,, 28 .	.	.	.	.	615	707	.	.	50	100	665	807
Oct. 5 .	.	.	.	.	550	431	.	.	200	200	750	631
,, 12 .	.	.	.	.	570	532	.	.	180	170	750	702
,, 19 .	.	.	.	.	470	672	.	.	180	300	650	972
,, 26 .	.	.	.	.	450	325	.	.	180	250	630	575
Nov. 2 .	.	.	.	.	350	375	.	.	190	250	540	625
,, 9 .	.	.	.	.	340	162	.	.	150	200	490	362
,, 16 .	.	.	.	.	340	29	.	.	150	150	490	179
,, 23 .	.	.	.	.	310	72	.	.	140	30	450	102
,, 30 .	.	.	.	.	200	117	.	.	60	30	260	147
Dec. 7 .	.	.	.	.	267	474	.	.	60	50	327	524
,, 14 .	.	.	.	.	320	960	.	.	.	.	320	960
,, 21 .	.	.	.	.	350	120	.	.	.	.	350	120
,, 28 .	.	.	.	.	200	170	.	.	.	.	200	170
,, 31 .	.	.	.	.	150	80	.	.	.	.	150	80
1862.												
June 7 .	.	.	.	.	30	.	?	*4	.	.	30	.
,, 14 .	.	.	.	.	70	2	85	13	.	.	155	15
,, 21 .	.	.	.	.	190	103	81	18	.	.	271	121
,, 28 .	.	.	.	.	260	102	91	35	.	.	351	137
July 5 .	.	.	.	.	260	117	94	90	20	2	374	209
,, 12 .	.	.	.	.	400	149	111	140	30	13	541	302
,, 19 .	.	.	.	.	500	605	133	227	50	85	683	917
,, 26 .	.	.	.	.	530	1021	135	157	60	80	725	1258

* From 1st January.

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballan-trae.		Campbel-town.		Inver-aray.		Green-ock.		Rothe-say.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1862.												
Aug. 2 .	.	.	.	.	580	1070	139	282	62	75	781	1427
,, 9 .	.	.	.	.	600	2020	159	721	123	460	882	3201
,, 16 .	.	.	.	.	600	1570	155	725	106	325	861	2620
,, 23 .	.	.	.	.	585	2660	143	708	110	505	838	3873
,, 30 .	.	.	.	.	715	3435	130	410	75	305	920	4150
Sept. 6 .	.	.	.	.	705	2760	124	325	70	200	899	3285
,, 13 .	.	.	.	.	680	2275	108	470	40	75	828	2820
,, 20 .	.	.	.	.	670	2880	88	280	29	50	787	3210
,, 27 .	.	.	.	.	675	3810	81	600	.	.	756	4410
Oct. 4 .	.	.	.	.	687	3520	41	45	.	.	728	3565
,, 11 .	.	.	.	.	690	3725	22	10	.	.	712	3735
,, 18 .	.	.	.	.	687	2911	.	.	.	.	687	2911
,, 25 .	.	.	.	.	574	1690	.	.	.	.	574	1690
Nov. 1 .	.	.	.	.	682	3074	.	.	.	.	682	3074
,, 8 .	.	.	.	.	770	3778	.	.	3	21	773	3799
,, 15 .	.	.	.	.	773	4212	.	.	5	46	778	4258
,, 22 .	.	.	.	.	670	2730	.	.	2	22	672	2752
,, 29 .	.	.	.	.	610	2399	.	.	.	.	610	2399
Dec. 6 .	.	.	.	.	400	432	.	.	.	.	400	432
,, 13 .	.	.	.	.	500	2700	.	.	.	.	500	2700
,, 20 .	.	.	.	.	450	961	.	.	.	.	450	961
,, 27 .	.	.	.	.	350	600	.	.	4	20	354	620
,, 31 .	.	.	.	.	150	50	.	.	.	.	150	50
1863.												
June 6 .	63	115	.	.	85	6	?	*49	.	.	148	121
,, 13 .	76	118½	50	40	145	45	55	44	.	.	326	247½
,, 20 .	73	85½	70	30	181	39	42	10	.	.	366	164½
,, 27 .	74	63	110	140	230	75	37	26	17	8	468	312
July 4 .	71	46½	138	526	320	82	47	52	12	10	588	716½
,, 11 .	58	21½	150	304	340	177	39	20	50	28	637	550½
,, 18 .	68	101	140	427	375	513	54	124	60	154	697	1319
,, 25 .	68	100	89	250	452	930	60	147	75	160	744	1587
Aug. 1 .	60	99	69	167	470	751	56	113	75	180	730	1310
,, 8 .	48	50	20	8	747	1725	35	52	60	260	910	2095
,, 15 .	41	20	9	7	650	1443	48	47	60	60	808	1577
,, 22 .	30	.	40	36	620	1430	35	12	47	10	772	1488
,, 29 .	17	5	29	7	690	1354	18	11	35	10	789	1387
,, 5 .	1	.	5	2	705	1120	10	8	26	15	747	1145
,, 12 .	1	.	18	3½	700	820	5	3	30	55	754	881½
,, 19 .	.	.	.	.	680	740	1	.	30	30	711	770
,, 26 .	1	.	.	.	630	957	2	2	15	7	648	966
Oct. 3 .	.	.	.	.	560	504	6	½	15	3	581	507½
,, 10 .	.	.	.	.	487	1250	.	.	15	4	502	1254
,, 17 .	.	.	.	.	650	1346	.	.	3	1	653	1347
,, 24 .	.	.	.	.	716	1678	.	.	200	180	916	1858
,, 31 .	.	.	.	.	605	1419	.	.	45	43	650	1462

* From 1t January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1863.												
Nov. 7	.	.	.	.	530	968	.	.	15	25	545	993
,, 14	.	.	.	.	532	719	.	.	100	147	632	866
,, 21	.	.	.	.	460	683	.	.	100	120	560	803
,, 28	.	.	.	.	411	800	.	.	110	300	521	1100
Dec. 5	.	.	.	.	426	905	.	.	80	132	506	1037
,, 12	.	.	.	.	365	394	.	.	75	250	440	644
,, 19	.	.	.	.	30	50	.	.	240	1200	270	1250
,, 26	.	.	.	.	.	.	.	.	190	1100	190	1100
,, 31	.	.	.	.	.	.	.	.	40	150	40	150
1864.												
June 4	57	2	.	.	62	6	?	*1	.	.	119	8
,, 11	70	11	27	20	215	31½	12	1	.	.	324	63½
,, 18	75	25	70	100	275	134	12	1	.	.	432	260
,, 25	74	62	156	345	355	400	25	40	.	.	560	847
July 2	79	158	143	396	450	277½	27	70	.	.	699	901½
,, 9	79	192	121	525	545	335	41	80	38	47	824	1179
,, 16	80	80½	122	678	560	772	43	98	280	840	1085	2468½
,, 23	76	181½	78	207	575	572	55	209	140	269	924	1438½
,, 30	49	52	94	138	456	735	45	95	140	244	784	1264
Aug. 6	43	43	70	103	473	618	50	77	270	300	906	1141
,, 13	31	11	61	68	455	418	43	54	240	100	830	651
,, 20	15	7	48	87	493	279	52	66	109	39	717	478
,, 27	10	5	64	100	456	1352	37	54	112	121	679	1632
Sept. 3	7	4	22	14	460	540	17	.	90	34	596	592
,, 10	4	6	3	1½	433	239	.	.	60	22	500	268½
,, 17	2	2	18	28½	545	1120	5	5	45	64	615	1219½
,, 24	.	.	18	35	540	570	26	20	100	160	684	785
Oct. 1	.	.	8	5½	530	755	9	13	100	600	647	1373½
,, 8	2	2	2	.	470	725	10	20	124	700	608	1447
,, 15	1	4	.	.	405	338	2	1	264	3033	672	3376
,, 22	.	.	.	.	300	279	3	36	95	34	398	349
,, 29	2	2	.	.	430	926	.	.	180	500	612	1428
Nov. 5	4	11	.	.	240	551	13	55	350	5200	607	5817
,, 12	7	18	.	.	121	526	21	109	360	2500	509	3153
,, 19	6	11	.	.	60	226	26	69	320	2600	412	2906
,, 26	2	7	.	.	50	112	20	95	310	2280	382	2494
Dec. 3	.	.	.	.	28	18	.	.	330	2330	358	2348
,, 10	.	.	.	.	18	7	8	.	400	4364	426	4371
,, 17	3	6	.	.	9	5	12	1	360	5500	384	5512
,, 24	.	.	.	.	.	.	10	3	200	1823	210	1826
,, 31	.	.	.	.	.	.	.	.	200	2614	200	2614
1865.												
June 3	24	1	.	.	64	5	.	.	.	.	88	6
,, 10	53	6	34	50	115	16	13	4	.	.	215	76
,, 17	45	9	134	100	163	52	13	1½	.	.	355	162½
,, 24	46	32	116	80	239	42	29	11½	.	.	430	165½

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* From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1865.													
July	1	59	39	80	140	258	34	29	7	14	10	440	230
,,	8	67	67	144	420	335	142	26	22	80	140	652	791
,,	15	50	106	118	296	605	594	29	83	170	220	972	1299
,,	22	44	67	48	121	580	1007	65	31	90	200	827	1426
,,	29	40	43	75	330	560	578	56	113	90	130	821	1194
Aug.	5	53	190	110	340	570	1003	74	367	209	650	1016	2550
,,	12	49	120	72	284	595	2683	54	360	239	800	1009	4247
,,	19	49	220	89	220	510	2020	58	300	240	750	946	3510
,,	26	30	62	48	139	580	2520	55	120	240	1600	953	4441
Sept.	2	4	4	22	29	600	4180	24	53	210	742	860	5008
,,	9	2	14	1	5	645	2356	8	27	120	218	776	2620
,,	16	2	.	2	3	550	3120	4	8	75	220	633	3351
,,	23	2	10	2	4	460	980	12	82	500	1720	976	2796
,,	30	.	.	1	1	380	1425	9	115	500	600	890	2141
Oct.	7	.	.	1	1½	335	410	4	22	550	1650	890	2083½
,,	14	.	.	.	.	237	369	3	36	500	3000	740	3405
,,	21	.	.	.	.	220	486	3	21	400	2000	623	2507
,,	28	.	.	.	.	326	877	6	34	120	300	452	1211
Nov.	4	4	33	.	.	195	225	35	920	20	15	254	1193
,,	11	16	131	.	.	290	395	62	890	220	400	588	1816
,,	18	16	199	.	.	210	246	65	352	400	2400	691	3197
,,	25	29	959	.	.	45	18	5	1	450	2084	529	3062
Dec.	2	36	393	.	.	.	.	32	159	500	2087	568	2639
,,	9	32	390	.	.	10	85	49	160	500	3800	591	4435
,,	16	38	888	.	.	8	250	33	130	500	2700	579	3968
,,	23	40	337	.	.	.	.	27	265	500	3600	567	4202
,,	30	5	80	.	.	.	.	30	300	400	6400	435	6780
1866.													
Jan.	6	.	.	.	.	.	.	31	405	320	2000	351	2405
,,	13	3	1	.	.	.	.	27	32	160	2500	190	2533
,,	20	.	.	.	.	.	.	3	.	200	2000	203	2000
,,	27	.	.	.	.	.	.	3	.	60	660	63	660
,,	29-31	.	.	.	.	.	.	1	.	40	300	41	300
June	2	.	.	.	.	24	4	8	2	.	.	32	6
,,	9	42	27	25	62	130	37	21	6	.	.	218	132
,,	16	53	25	90	108	160	73	26	13	.	.	329	219
,,	23	52	42	108	108	176	101	25	7	.	.	361	258
,,	30	55	13	135	122	240	240	26	10	.	.	456	385
July	7	50	48	160	230	365	462	44	40	40	29	659	809
,,	14	63	108	80	146	345	234	69	90	90	74	647	652
,,	21	56	183	72	164	356	360	74	130	60	83	618	920
,,	28	50	232	83	131	520	617	91	320	70	120	814	1420
Aug.	4	51	239	84	200	450	602	83	181	110	452	778	1674
,,	11	33	84	57	189	500	1270	53	70	200	790	843	2403
,,	18	39	23	83	275	460	228	61	168	90	566	733	3260
,,	25	13	27	57	175	545	2165	49	41	80	341	744	2749

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1866.												
Sept. 1	5	11	43	73	525	1585	37	46	89	306	699	2021
,, 8	3	4	22	36	576	2440	9	26	70	372	680	2878
,, 15	3	2	4	1	474	908	2	4	40	100	523	1015
,, 22	.	.	.	.	550	1384	3	6	40	.	593	1390
,, 29	.	.	.	.	450	570	2	1	50	107	502	678
Oct. 6	.	.	.	.	600	3260	2	13	70	120	672	3393
,, 13	2	21	.	.	410	3696	11	106	300	1962	713	5785
,, 20	.	.	.	.	490	1588	4	13	4	96	498	1697
,, 27	.	.	.	.	475	1203	1	.	230	920	706	2123
Nov. 3	3	38	.	.	375	1108	44	487	400	3500	822	5133
,, 10	12	185	.	.	200	239	28	75	450	3800	690	4299
,, 17	16	65	.	.	175	215	39	305	500	4999	730	5584
,, 21	90	934	.	.	162	486	28	60	350	1800	630	3280
Dec. 1	18	70	.	.	155	510	8	.	400	1600	581	2180
,, 8	12	6	.	.	140	445	33	43	450	500	635	994
,, 15	10	1	.	.	105	120	32	24	450	900	597	1045
,, 22	6	.	.	.	113	130	11	.	230	800	360	930
,, 29	.	.	.	.	103	80	5	.	230	3500	338	3580
1867.												
Jan. 5	.	.	.	.	90	217	23	149	220	2300	333	2666
,, 12	14	4	.	.	70	200	25	83	200	2000	309	2287
,, 19	.	.	.	.	15	10	31	70	130	2860	176	2940
,, 26	20	62	.	.	5	.	13	7	100	3800	138	3869
Feb. 2	13	4	.	.	.	.	.	.	60	1800	73	1804
June 1	.	.	.	.	.	.	5	½	.	.	5	½
,, 8	39	30	36	60	52	55	22	3	.	.	149	148
,, 15	44	47	63	105	89	124	14	7	.	.	210	283
,, 22	55	23	157	284	216	260	19	6	.	.	447	573
,, 29	53	26	70	127	350	332	30	11½	.	.	503	496½
July 6	53	87	102	244	355	295	28	18	.	.	538	644
,, 13	57	92	111	252	325	952	60	98	.	.	553	1394
,, 20	55	84	60	144	410	788	46	46	.	.	571	1062
,, 27	59	41	61	87	483	1238	23	14	.	.	626	1380
Aug. 3	50	110	87	256	360	3096	30	61	65	70	592	3593
,, 10	38	70	62	127	386	4193	70	170	60	67	616	4627
,, 17	37	60	66	108	335	1316	35	84	60	103	533	1671
,, 24	40	45	47	119	410	2041	30	52	55	85	582	2342
,, 31	34	45	40	99	430	2810	33	36	52	75	589	3065
Sept. 7	2	.	26	25	507	2089	42	44	40	43	617	2201
,, 14	1	.	1	1	527	981	14	27	25	37	568	1046
,, 21	.	.	.	.	500	1467	27	13	32	50	559	1530
,, 28	.	.	.	.	450	1764	16	14	46	90	512	1868
Oct. 5	.	.	.	.	340	611	.	.	44	40	384	651
,, 12	.	.	.	.	320	989	9	7	25	14	354	1010
,, 19	.	.	.	.	310	451	3	9	46	120	359	580
,, 26	.	.	.	.	395	1050	8	16	260	340	663	1406

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1867.												
Nov. 2 .	.	.	.	.	127	755	6	36	450	4500	583	5291
,, 9 .	.	.	.	.	125	391	7	51	200	1340	332	1782
,, 16 .	3	65	.	.	130	435	5	47	150	400	288	947
,, 23 .	5	10	.	.	174	1595	4	20	28	607	211	2232
,, 30 .	2	21	.	.	180	1470	.	.	35	730	217	2221
Dec. 7 .	.	.	.	.	170	705	6	.	70	550	246	1255
,, 14 .	.	.	.	.	140	855	3	10	250	610	393	1475
,, 21 .	2	30	.	.	124	190	5	36	250	3100	381	3356
,, 28 .	.	.	.	.	145	530	9	20	130	3060	284	3610
,, 31 .	.	.	.	.	125	160	.	.	.	.	125	160
1868.												
Jan. 4 .	14	66	.	.	135	525	.	.	8	60	157	651
,, 11 .	2	14	.	.	145	695	.	.	150	1071	297	1780
,, 18 .	.	.	.	.	130	630	.	.	100	454	230	1084
,, 25 .	.	.	.	.	125	1130	.	.	80	1290	205	2420
Feb. 1 .	.	.	.	.	45	50	.	.	80	60	125	110
,, 8 .	.	.	.	.	.	.	.	.	.	.	.	.
June 6 .	.	.	27	60	166	530	.	.	.	.	193	590
,, 13 .	.	.	58	49	175	765	.	.	.	.	233	814
,, 20 .	.	.	80	144	185	1045	.	.	.	.	265	1189
,, 27 .	.	.	55	100	220	700	?	*20	.	.	275	800
July 4 .	.	.	61	191	220	1285	24	30	.	.	305	1506
,, 11 .	?	306†	61	188	280	1775	18	32	.	.	359	1995
,, 18 .	46	124	50	145	301	2035	54	120	.	.	451	2424
,, 25 .	54	141	68	110	316	1800	24	131	30	54	492	2236
Aug. 1 .	48	144	50	65	370	2510	46	263	33	66	547	3048
,, 8 .	57	164	26	64	380	1955	47	192	37	182	547	2557
,, 15 .	40	70	34	70	410	2680	40	80	30	53	554	2953
,, 22 .	45	218	47	155	415	1920	34	110	30	57	571	2460
,, 29 .	.	.	52	68	368	830	6	19	10	13	436	930
Sept. 5 .	3	3	59	302	420	2179	22	228	43	320	547	3032
,, 12 .	12	57	21	21	434	2286	20	115	30	130	517	2609
,, 19 .	18	137	.	.	450	3058	14	60	30	60	512	3315
,, 26 .	10	18	.	.	485	1981	16	25	26	50	537	2074
Oct. 3 .	7	25	.	.	353	1084	13	80	40	180	413	1369
,, 10 .	9	33	.	.	398	2019	36	194	65	200	508	2446
,, 17 .	3	15	.	.	426	1363	36	383	120	400	585	2161
,, 24 .	6	25	.	.	440	1445	45	1022	110	150	601	2642
,, 31 .	.	.	.	.	205	210	98	1500	60	.	363	1710
Nov. 7 .	2	11	.	.	75	45	180	2496	.	.	257	2552
,, 14 .	3	30	.	.	30	30	320	5800	.	.	353	5860
,, 21 .	5	160	.	.	32	45	340	6000	8	160	385	6365
,, 28 .	2	11	.	.	32	60	320	5500	4	68	358	5639

* From 1st January. † From 11th January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1868.												
Dec. 5	1	5	.	.	26	25	300	2600	6	80	333	2710
,, 12	.	.	.	.	65	370	340	3500	6	.	411	3870
,, 19	4	13	.	.	75	510	340	3000	90	1350	509	4873
,, 26	5	10	.	.	12	225	40	120	140	1904	197	2259
,, 31	.	.	.	.	.	.	12	20	250	1300	262	1320
1869.												
Jan. 2	.	.	.	.	2	15	.	.	.	.	2	15
,, 9	5	.	.	.	36	560	.	.	300	1500	341	2060
,, 16	1	.	.	.	72	140	.	.	260	1200	333	1340
,, 23	2	.	.	.	70	50	?	*260	200	400	272	450
,, 30	.	.	.	.	4	4	70	210	8	250	82	464
June 5	52	136	32	75	156	475	4	20	36	80	280	786
,, 12	52	145	38	200	195	530	23	27	40	74	348	976
,, 19	50	92	56	250	194	930	26	30	50	110	376	1412
,, 26	52	52	86	580	231	1610	27	24	52	142	448	2408
July 3	61	119	94	225	244	1355	40	56	.	.	439	1755
,, 10	63	219	101	255	366	780	50	90	.	.	580	1344
,, 17	60	236	78	430	339	1370	52	109	.	.	529	2245
,, 24	70	289	108	570	396	1705	58	165	.	.	632	2729
,, 31	65	262	163	501	402	1269	52	286	.	.	682	2318
Aug. 7	53	151	105	506	383	1849	56	293	.	.	597	2799
,, 14	44	164	80	587	390	3001	71	294	31	117	616	4163
,, 21	40	112	206	1202	424	2905	45	234	29	120	744	4573
,, 28	37	107	182	1057	368	1509	51	215	100	700	738	3588
Sept. 4	11	38	94	538	364	3543	39	142	98	483	606	4744
,, 11	.	.	138	235	326	2456	33	40	70	287	567	3018
,, 18	1	6	34	80	404	1135	17	36	120	680	576	1937
,, 25	7	7	7	90	392	579	118	53	100	70	624	718
Oct. 2	.	.	12	67	369	874	161	205	60	45	602	1191
,, 9	9	5	18	79	434	2158	180	12	250	740	891	2994
,, 16	4	.	.	.	400	1145	174	43	360	2040	938	3228
,, 23	6	2	.	.	135	302	400	2996	130	390	671	3690
,, 30	9	18	.	.	36	95	480	6000	50	260	575	6373
Nov. 6	.	.	.	.	16	245	500	3200	63	280	579	3725
,, 13	.	.	.	.	10	10	200	120	330	1200	540	1330
,, 20	5	5	.	.	4	5	30	14	400	1800	439	1824
,, 27	.	.	.	.	.	.	120	844	400	2300	520	3144
Dec. 4	6	14	.	.	14	35	180	302	500	3200	700	3551
,, 11	.	.	.	.	32	135	.	.	500	3750	532	3885
,, 18	.	.	.	.	74	490	.	.	350	1400	424	1890
,, 25	.	.	.	.	85	465	12	200	200	250	297	915
,, 31	.	.	.	.	85	295	9	150	150	225	244	670
1870.												
Jan. 1	.	.	.	.	55	25	.	.	.	.	55	25
,, 8	7	2	.	.	80	145	30	300	250	700	367	1147
,, 15	.	.	.	.	70	210	.	.	200	900	270	1110
,, 22	17	9	.	.	85	320	.	.	200	400	302	729
,, 29	13	3	.	.	56	225	.	.	150	450	219	678

* From 1st January.

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballan-trae.		Campbel-town.		Inver-aray.		Green-ock.		Rothe-say.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1870. Winter & Spring.	?	1635	.	.	.	.	.	.	.	.	.	.
May 28 .	48	113	.	.	.	.	.	.	.	.	48	113
June 4 .	53	62	.	.	165	500	.	.	.	.	218	562
,, 11 .	66	152	24	200	205	695	39	62	.	.	334	1109
,, 18 .	67	523	44	304	210	305	47	54	.	.	368	1186
,, 25 .	69	690	57	245	255	1185	59	224	.	.	440	2344
July 2 .	77	515	102	964	255	895	57	212	.	.	491	2586
,, 9 .	80	485	91	689	318	860	54	217	40	480	583	2731
,, 16 .	78	467	115	535	340	1190	41	229	50	400	624	2821
,, 23 .	74	229	164	900	331	1505	71	404	70	350	710	3388
,, 30 .	37	64	95	588	426	2417	70	296	65	140	693	3505
Aug. 6 .	47	94	98	641	386	1309	62	152	64	130	657	2326
,, 13 .	30	50	232	859	384	800	61	158	60	300	767	2167
,, 20 .	11	38	204	660	358	1283	63	250	130	360	766	2591
,, 27 .	.	.	168	642	394	1778	49	84	130	300	741	2804
Sept. 3 .	.	.	163	78	518	1041	41	66	120	160	842	1345
,, 10 .	.	.	127	152	385	544	8	4	132	210	652	910
,, 17 .	15	16	81	174	297	102	53	113	118	123	564	528
,, 24 .	.	.	95	165	350	869	50	60	140	240	635	1334
Oct. 1 .	.	.	75	65	335	533	60	75	200	400	670	1073
,, 8 .	4	4	146	500	375	994	40	40	160	260	725	1798
,, 15 .	.	.	22	20	389	939	40	20	100	130	551	1109
,, 22 .	.	.	.	.	367	1045	40	20	30	100	437	1165
,, 29 .	9	13	4	4	303	725	24	22	200	560	540	1324
Nov. 5 .	13	24	2	13	391	1620	32	64	260	850	698	2571
,, 12 .	10	11	16	76	312	740	16	68	240	731	594	1626
,, 19 .	.	.	13	35	331	765	.	.	115	300	459	1100
,, 26 .	.	.	.	.	300	550	12	108	100	260	412	918
Dec. 3 .	.	.	.	.	215	325	60	598	450	4500	725	5423
,, 10 .	5	101	.	.	80	80	20	150	200	450	305	781
,, 17 .	.	.	.	.	39	25	20	200	300	2400	359	2625
,, 24 .	.	.	.	.	23	170	30	100	230	600	283	870
,, 31 .	.	.	.	.	31	195	.	.	180	1050	211	1245
1871. Jan. 7 .	.	.	.	.	16	140	.	.	200	900	216	1040
,, 14 .	.	.	.	.	54	985	.	.	180	1000	234	1985
,, 21 .	.	.	.	.	50	500	.	.	150	2000	200	2500
,, 28 .	22	35	.	.	40	215	?	*40	130	360	192	610
Winter & Spring.	?	1621	.	.	.	.	.	.	.	.	.	.
May 20 .	51	64	.	.	.	.	.	.	.	.	51	64
,, 27 .	65	75	.	.	.	.	.	.	.	.	65	75

* From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1871.												
June 3 .	77	85	.	.	127	230	.	.	.	.	204	315
,, 10 .	84	140	45	181	165	635	?	*35	.	.	294	956
,, 17 .	80	145	73	200	231	530	43	72	.	.	427	947
,, 24 .	90	111	102	501	348	865	51	115	56	300	647	1892
July 1 .	89	169	104	262	402	1155	57	192	80	500	732	2278
,, 8 .	89	85	94	267	410	1325	55	144	86	360	734	2181
,, 15 .	69	64	94	276	374	550	46	32	80	50	663	972
,, 22 .	56	31	252	352	388	400	53	37	65	15	814	835
,, 29 .	24	14	326	363	466	277	30	20	50	30	896	704
Aug. 5 .	12	7	316	481	350	249	34	23	110	120	822	880
,, 12 .	5	.	234	371	278	647	32	25	250	500	799	1543
,, 19 .	6	5	230	348	292	410	33	31	200	300	761	1094
,, 26 .	.	.	148	120	224	274	5	6	260	295	637	695
Sept. 2 .	.	.	188	141	268	820	16	58	112	100	584	1119
,, 9 .	5	5	142	131	295	203	2	.	150	110	594	449
,, 16 .	.	.	132	333	211	213	12	16	140	190	495	752
,, 23 .	.	.	136	344	227	200	10	4	130	100	503	648
,, 30 .	.	.	78	102	84	101	.	.	130	125	292	328
Oct. 7 .	.	.	44	20	150	333	12	6	50	20	256	379
,, 14 .	.	.	96	194	160	1035	10	10	30	12	296	1251
,, 21 .	2	9	35	76	292	624	4	6	.	.	333	715
,, 28 .	6	20	.	.	160	90	.	.	6	6	172	116
Nov. 4 .	4	2	.	.	41	124	8	8	.	.	53	134
,, 11 .	.	.	.	.	70	160	50	58	8	96	128	314
,, 18 .	.	.	.	.	109	60	50	220	30	.	189	280
,, 25 .	.	.	.	.	41	80	30	102	260	1200	331	1382
Dec. 2 .	.	.	.	.	20	45	80	300	550	3400	650	3745
,, 9 .	.	.	.	.	18	40	70	700	250	1500	338	2240
,, 16 .	1	10	.	.	4	.	.	.	370	1000	375	1010
,, 23 .	.	.	.	.	6	.	.	.	200	500	206	500
,, 30 .	.	.	.	.	6	.	.	.	250	1500	256	1500
1872.												
Jan. 6 .	.	.	.	.	.	.	.	.	250	30	250	30
,, 13 .	.	.	.	.	.	.	.	.	200	150	200	150
,, 20 .	.	.	.	.	2	.	.	.	100	.	102	.
,, 27 .	.	.	.	.	8	.	.	.	.	.	8	.
Winter & Spring.	?	1725	.	.	.	.	.	.	.	.	.	.
June 1 .	19	5	.	.	101	70	.	.	.	.	120	75
,, 8 .	53	16	39	37	127	163	.	.	.	.	219	216
,, 15 .	65	11	70	47	137	188	.	.	.	.	272	246
,, 22 .	52	8	79	66	149	139	.	.	.	.	280	213
,, 29 .	58	21	98	136	147	155	.	.	.	.	303	312
July 6 .	64	44	180	500	163	195	?	*15	.	.	407	739
,, 13 .	64	50	158	320	261	320	25	25	.	.	508	715
,, 20 .	50	20	242	940	239	300	35	13	.	.	566	127
,, 27 .	39	25	368	2485	289	735	30	24	95	80	821	334

* From 1st June.

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1872.												
Aug. 3 .	38	33	268	669	332	617	46	50	80	90	764	1459
,, 10 .	30	27	350	1719	352	343	15	15	120	130	867	2234
,, 17 .	39	87	380	401	307	310	21	28	170	120	917	946
,, 24 .	35	137	399	645	329	507	19	24	120	280	902	1593
,, 31 .	15	11	319	947	270	205	13	24	135	120	752	1307
Sept. 7 .	.	.	234	873	263	335	8	26	200	370	705	1604
,, 14 .	.	.	180	560	169	38	4	20	100	70	453	688
,, 21 .	.	.	224	2012	180	315	8	7	80	60	492	2394
,, 28 .	.	.	226	780	250	573	13	29	150	220	639	1602
Oct. 5 .	.	.	190	230	260	365	11	60	90	300	551	685
,, 12 .	4	10	180	2051	68	95	17	110	95	85	364	2351
,, 19 .	.	.	6	10	63	30	15	45	60	165	144	250
,, 26 .	.	.	4	4	14	4	5	26	500	260	523	294
Nov. 2 .	.	.	.	.	7	5	4	3	350	340	361	348
,, 9 .	5	10	.	.	.	.	.	.	345	650	350	660
,, 16 .	.	.	.	.	87	430	4	3	340	1500	431	1933
,, 23 .	.	.	.	.	240	950	4	6	300	1400	544	2356
,, 30 .	.	.	.	.	176	850	.	.	290	740	466	1590
Dec. 7 .	.	.	.	.	256	700	.	.	300	1200	556	1900
,, 14 .	.	.	.	.	36	120	.	.	300	600	336	720
,, 21 .	.	.	.	.	.	.	.	.	180	185	180	185
,, 28 .	.	.	.	.	.	.	.	.	120	260	120	260
1873.												
Jan. 4 .	.	.	.	.	.	.	.	.	65	120	65	120
,, 11 .	.	.	.	.	.	.	.	.	150	50	150	50
,, 18 .	.	.	.	.	.	.	.	.	50	.	50	.
,, 25 .	.	.	.	.	.	.	.	.	5	.	5	.
,, 31 .	.	.	.	.	.	.	.	.	.	.	.	.
Winter & Spring.	?	2025	.	.	.	.	.	.	.	.	.	.
May 31 .	26	42	.	.	.	.	.	.	.	.	26	42
June 7 .	46	39	?	82	115	250	.	.	.	.	161	371
,, 14 .	57	95	47	187	122	125	17	13	.	.	243	420
,, 21 .	62	109	67	236	137	360	20	7	.	.	286	712
,, 28 .	66	129	65	206	174	310	30	55	90	50	425	750
July 5 .	73	244	138	300	194	520	39	91	100	220	544	1375
,, 12 .	74	202	99	504	266	370	56	148	100	60	595	1284
,, 19 .	66	174	1581	186	214	275	53	166	64	60	555	1861
,, 26 .	65	322	7422	181	213	263	57	236	70	70	1147	3072
Aug. 2 .	58	243	5022	115	136	379	50	150	126	294	872	3181
,, 9 .	42	130	6181	001	16	13	43	150	49	48	768	1342
,, 16 .	35	32	413	897	36	12	14	9	76	40	574	990
,, 23 .	22	34	4681	552	56	16	20	32	96	160	662	1794
,, 30 .	.	.	520	656	104	93	2	5	100	120	726	874

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1873.												
Sept. 6	.	.	344	844	94	52	12	53	100	234	550	1183
,, 13	4	20	151	167	30	50	.	.	138	532	323	769
,, 20	6	17	156	531	20	100	2	10	84	82	268	740
,, 27	7	21	2821	960	20	36	11	45	100	370	420	2432
Oct. 4	.	.	153	632	140	160	14	23	120	360	427	1175
,, 11	5	20	23	49	20	94	22	252	100	180	170	595
,, 18	.	.	118	590	35	170	18	63	34	86	205	909
,, 25	.	.	40	15	65	.	.	.	.	.	105	15
Nov. 1	.	.	.	.	55	.	16	130	15	.	86	130
,, 8	12	22	.	.	45	.	20	135	20	10	97	167
,, 15	.	.	.	.	35	.	27	153	10	5	72	158
,, 22	4	9	.	.	30	.	.	.	20	.	54	9
,, 29	.	.	.	.	20	.	.	.	.	.	20	.
Dec. 6	.	.	.	.	15	.	.	.	.	.	15	.
,, 13	.	.	.	.	.	.	.	.	.	.	.	.
,, 20	.	.	.	.	.	.	.	.	.	.	.	.
,, 27	.	.	.	.	.	.	.	.	.	.	.	.
1874.												
Jan. 3	.	.	.	.	.	.	.	.	.	.	.	.
,, 10	.	.	.	.	.	.	.	.	.	.	.	.
,, 17	.	.	.	.	.	.	.	.	.	.	.	.
,, 24	.	.	.	.	.	.	.	.	.	.	.	.
,, 31	.	.	.	.	.	.	.	.	.	.	.	.
Winter & Spring.	?	4890	.	.	.	.	.	.	.	.	.	.
May 23	?	99	.	.	.	.	.	.	.	.	?	99
,, 30	57	66	.	.	.	.	.	.	.	.	57	66
June 6	68	112		106	92	80	.	.	.	.	160	298
,, 13	67	135	50	136	99	75	13	17	.	.	229	363
,, 20	64	220	107	426	116	345	38	127	.	.	325	1118
,, 27	68	400	134	590	148	215	37	228	.	.	387	1433
July 4	69	108	154	481	185	260	29	41	.	.	437	890
,, 11	68	309	288	1584	192	465	25	50	.	.	573	2408
,, 18	69	217	274	1666	233	275	45	94	80	210	701	2462
,, 25	57	202	357	879	209	137	42	76	83	96	748	1390
Aug. 1	41	227	302	653	200	228	40	77	126	297	709	1482
,, 8	41	278	431	676	238	211	36	132	123	497	869	1794
,, 15	16	367	287	573	193	98	33	160	72	76	601	1274
,, 22	15	338	350	2109	208	307	20	174	164	338	757	3266
,, 29	37	381	164	361	209	301	25	230	182	309	617	1582
Sept. 5	2	1	180	919	97	206	10	46	65	126	354	1298
,, 12	.	.	260	526	188	368	34	167	72	200	554	1261
,, 19	.	.	280	1423	134	369	33	101	114	293	561	2186
,, 26	.	.	151	208	134	359	31	125	145	344	461	1036

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1874.												
Oct. 3 .	.	.	230	45	124	218	.	.	100	116	454	379
,, 10 .	.	.	90	11	85	30	.	.	20	8	195	49
,, 17 .	.	.	120	500	37	55	.	.	30	60	187	615
,, 24 .	.	.	250	70	28	17	.	.	12	10	290	97
,, 31 .	.	.	48	841	16	170	.	.	60	140	124	1151
Nov. 7 .	.	.	44	350	.	.	.	.	40	100	84	450
,, 14 .	.	.	88	267	10	2	.	.	.	.	98	269
,, 21 .	.	.	.	.	4	15	.	.	.	.	4	15
,, 28 .	.	.	.	.	.	.	.	.	.	.	.	.
Dec. 5 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 12 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 19 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 26 .	.	.	.	.	.	.	.	.	.	.	.	.
1875.												
Jan. 2 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 9 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 16 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 23 .	.	.	.	.	2	4	.	.	.	.	2	4
,, 30 .	.	.	.	.	4	6	.	.	.	.	4	6
Winter & Spring.	?	9197	.	.	.	.	.	.	.	.	.	.
May 22 .	37	28	.	.	.	.	.	.	.	.	37	28
,, 29 .	47	22	.	.	.	.	.	.	.	.	47	22
June 5 .	53	6	?	58	70	95	.	.	.	.	123	159
,, 12 .	46	2	55	39	77	80	.	.	.	.	178	121
,, 19 .	27	2	110	90	106	225	.	.	.	.	243	317
,, 26 .	38	3	160	308	106	250	.	.	.	.	304	561
July 3 .	30	19	140	204	121	340	.	.	.	.	291	563
,, 10 .	42	59	166	257	196	1005	?	30	65	60	469	1411
,, 17 .	43	20	115	215	225	1635	33	28	110	143	526	2021
,, 24 .	43	53	82	118	230	1020	17	30	133	123	505	1344
,, 31 .	51	67	52	323	219	1675	19	105	116	207	457	2377
Aug. 7 .	58	116	178	606	210	1850	24	144	95	392	565	3108
,, 14 .	34	33	150	188	200	630	27	103	54	172	465	1126
,, 21 .	30	52	74	132	220	915	30	100	80	290	434	1489
,, 28 .	20	20	84	160	235	674	22	71	35	53	396	978
Sept. 4 .	12	20	94	116	208	203	22	36	70	51	406	426
,, 11 .	6	10	82	172	188	128	25	45	40	40	341	395
,, 18 .	.	.	29	70	120	15	.	.	6	3	155	88
,, 25 .	.	.	14	7	62	32	.	.	4	.	80	39
Oct. 2 .	.	.	.	.	114	47	.	.	.	.	114	47
,, 9 .	.	.	14	2	110	117	.	.	.	.	124	119
,, 16 .	.	.	.	.	126	525	.	.	76	82	202	607
,, 23 .	.	.	.	.	130	35	.	.	30	20	160	55
,, 30 .	.	.	.	.	166	525	.	.	35	35	201	560

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1875.												
Nov. 6 .	.	.	.	.	188	910	.	.	31	286	219	1196
,, 13 .	.	.	.	.	93	110	.	.	120	130	213	240
,, 20 .	.	.	.	.	96	165	.	.	80	90	176	255
,, 27 .	.	.	.	.	80	30	.	.	15	.	95	30
Dec. 4 .	.	.	.	.	65	115	.	.	.	.	65	115
,, 11 .	.	.	.	.	106	90	.	.	.	.	106	90
,, 18 .	.	.	.	.	70	90	.	.	.	.	70	90
,, 25 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 31 .	.	.	.	.	10	5	.	.	.	.	10	5
1876.												
Jan. 1 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 8 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 15 .	.	.	.	.	6	30	.	.	.	.	6	30
,, 22 .	.	.	.	.	4	.	.	.	.	.	4	.
,, 29 .	.	.	.	.	.	.	.	.	.	.	.	.
Winter & Spring.	?	6071	.	.	.	.	.	.	.	.	.	.
May 13 .	26	43	.	.	.	.	.	.	.	.	26	43
,, 20 .	59	75	.	.	.	.	.	.	.	.	59	75
,, 27 .	65	48	.	.	.	.	.	.	.	.	65	48
June 3 .	67	62	?	9	74	48	.	.	.	.	141	119
,, 10 .	71	310	33	41	79	303	.	.	.	.	183	654
,, 17 .	71	255	108	249	88	262	?	*79	.	.	267	766
,, 24 .	72	136	104	82	103	162	33	92	.	.	312	472
July 1 .	73	156	185	352	118	400	45	91	.	.	421	999
,, 8 .	73	176	141	239	176	445	42	67	60	75	492	1002
,, 15 .	73	156	140	416	170	1270	38	108	46	75	467	2025
,, 22 .	59	115	130	305	180	910	40	129	70	144	479	1603
,, 29 .	57	105	146	729	200	2095	41	62	65	128	509	3119
Aug. 5 .	54	89	186	1363	159	1222	34	95	47	151	480	2920
,, 12 .	32	162	186	946	162	1450	38	358	71	306	489	3222
,, 19 .	30	47	143	577	183	609	35	109	80	318	471	1660
,, 26 .	18	9	114	452	200	350	40	71	79	152	451	1034
Sept. 2 .	24	25	195	422	200	546	39	124	95	229	553	1346
,, 9 .	10	17	210	594	200	622	22	41	143	460	585	1734
,, 16 .	.	.	190	166	200	378	19	25	96	269	505	838
,, 23 .	.	.	148	223	208	429	3	16	128	297	487	965
,, 30 .	.	.	233	90	248	557	15	33	145	409	641	1089
Oct. 7 .	5	10	9	20	245	436	2	17	80	90	341	573
,, 14 .	8	7	.	.	250	520	.	.	56	135	314	662
,, 21 .	4	2	.	.	210	989	.	.	40	190	254	1181
,, 28 .	.	.	.	.	420	5300	.	.	47	436	467	5736
Nov. 4 .	.	.	.	.	300	900	.	.	110	253	410	1153
,, 11 .	.	.	.	.	186	1758	.	.	78	489	264	2247
,, 18 .	.	.	.	.	82	158	.	.	5	30	87	188
,, 25 .	.	.	.	.	100	70	.	.	110	166	210	236

* From 1st June.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1876.												
Dec. 2 .	.	.	.	.	46	617	.	.	90	158	136	775
,, 9 .	.	.	.	.	60	.	.	.	5	2	65	2
,, 16 .	.	.	.	.	10	.	.	.	.	.	10	.
,, 23 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 30 .	.	.	.	.	.	.	.	.	.	.	.	.
1877.												
Jan. 6 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 13 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 20 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 27 .	.	.	.	.	2	.	.	.	.	.	2	.
Winter & Spring.	?	10254	.	.	.	.	.	.	.	.	.	10254
May 12 .	37	81	.	.	.	.	.	.	.	.	37	81
,, 19 .	57	57	.	.	.	.	.	.	.	.	57	57
,, 26 .	70	157	.	.	.	.	.	.	.	.	70	157
June 2 .	73	203	?	5	.	.	.	.	.	.	73	208
,, 9 .	59	134	26	5	73	24	?	72	.	.	158	235
,, 16 .	79	113	89	354	75	1284	33	73	.	.	276	1824
,, 23 .	81	111	119	512	103	706	39	37	.	.	342	1366
,, 30 .	44	75	117	292	141	600	38	52	18	14	358	1033
July 7 .	55	216	120	395	167	1254	45	132	29	60	416	2057
,, 14 .	70	94	109	450	195	897	41	57	51	73	466	1571
,, 21 .	56	128	100	1270	201	1265	34	92	85	154	476	2909
,, 28 .	57	183	128	1502	242	702	34	120	45	120	506	2627
Aug. 4 .	38	212	138	1988	412	1109	32	211	46	203	666	3723
,, 11 .	12	29	132	2109	442	1735	36	172	68	339	690	4384
,, 18 .	24	40	84	866	214	1110	36	142	118	380	476	2538
,, 25 .	35	87	109	657	304	423	41	105	64	266	553	1538
Sept. 1 .	4	13	82	516	400	1053	29	80	104	258	619	1920
,, 8 .	.	.	133	294	344	1371	13	21	70	219	560	1905
,, 15 .	.	.	64	46	217	202	8	15	35	20	324	283
,, 22 .	.	.	95	410	287	697	12	70	50	120	444	1297
,, 29 .	.	.	89	368	286	2099	14	42	13	49	402	2558
Oct. 6 .	.	.	61	42	292	1587	6	9	104	437	463	2075
,, 13 .	2	10	.	.	376	210	.	.	12	3	390	223
,, 20 .	.	.	.	.	266	240	.	.	35	40	301	280
,, 27 .	.	.	.	.	134	180	.	.	.	.	134	180
Nov. 3 .	.	.	.	.	70	660	.	.	22	491	92	1151
,, 10 .	.	.	.	.	7	60	.	.	30	30	37	90
,, 17 .	.	.	.	.	48	150	.	.	.	.	48	150
,, 24 .	.	.	.	.	82	.	.	.	.	.	82	.
Dec. 1 .	.	.	.	.	70	.	.	.	60	392	142	392
,, 8 .	.	.	.	.	78	.	.	.	15	5	85	5
,, 15 .	.	.	.	.	10	.	.	.	.	.	10	.
,, 22 .	.	.	.	.	6	.	.	.	.	.	6	.
,, 29 .	.	.	.	.	.	.	.	.	.	.	.	.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1878.													
Jan.	5	31	95	.	.	.	.	.	.	.	.	31	95
,,	12	48	230	.	.	.	.	.	.	.	.	48	230
,,	19	83	751	.	.	.	.	.	.	.	.	83	751
,,	26	73	174	.	.	.	.	.	.	.	.	73	174
Feb.	2	151	3820	.	.	.	.	.	.	.	.	151	3820
,,	9	165	4462	.	.	.	.	.	.	.	.	165	4462
,,	16	154	206	.	.	.	.	.	.	.	.	154	206
,,	23	191	1690	.	.	.	.	.	.	.	.	191	1690
March	2	182	4600	.	.	.	.	.	.	.	.	182	4600
,,	9	182	22	.	.	.	.	.	.	.	.	182	22
,,	16	182	1261	.	.	.	.	.	.	.	.	182	1261
,,	23	178	474	.	.	.	.	.	.	.	.	178	474
,,	30	35	22	.	.	.	.	.	.	.	.	35	22
April	6	15	23	.	.	.	.	.	.	.	.	15	23
,,	13	.	.	.	.	.	.	.	.	.	.	.	.
,,	20	.	.	.	.	.	.	.	.	.	.	.	.
,,	27	.	.	.	.	.	.	.	.	.	.	.	.
May	4	.	.	.	.	.	.	.	.	.	.	.	.
,,	11	18	20	.	.	.	.	.	.	.	.	18	20
,,	18	37	25	.	.	.	.	.	.	.	.	37	25
,,	25	57	50	?	*800	.	.	?	24	.	.	57	74
June	1	71	145	.	.	.	.	26	40	.	.	97	185
,,	8	80	73	64	206	87	207	27	26	.	.	258	512
,,	15	84	99	107	793	112	322	26	22	.	.	329	1236
,,	22	84	58	152	293	104	480	26	30	.	.	366	861
,,	29	79	97	183	835	138	335	18	10	?	†25	418	1277
July	6	75	202	241	360	141	650	20	21	15	23	492	1256
,,	13	77	116	163	1508	154	1100	23	76	46	122	463	2922
,,	20	45	46	183	1443	150	1465	26	64	88	210	492	3228
,,	27	.	.	153	550	145	670	28	70	60	73	386	1363
Aug.	3	.	.	299	903	133	972	25	47	56	17	513	1939
,,	10	.	.	180	255	139	115	17	25	76	45	412	440
,,	17	.	.	149	289	188	47	25	104	69	119	431	559
,,	24	.	.	169	290	126	80	24	29	115	196	434	595
,,	31	.	.	152	268	123	57	15	17	20	9	310	351
Sept.	7	.	.	86	279	125	55	3	3	5	2	219	339
,,	14	.	.	32	13	144	37	.	.	34	14	210	64
,,	21	.	.	.	.	5	.	.	.	4	2	9	2
,,	28	.	.	.	.	40	4	.	.	.	.	40	4
Oct.	5	.	.	.	.	.	.	.	.	.	.	.	.
,,	12	.	.	.	.	.	.	.	.	.	.	.	.
,,	19	.	.	.	.	12	14	.	.	.	.	12	14
,,	26	.	.	.	.	24	10	.	.	.	.	24	10

* April and May. † For June.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1878.													
Nov.	2	.	.	.	.	6	.	.	.	.	.	6	.
,,	9	.	.	.	.	50	1240	.	.	17	83	67	1323
,,	16	.	.	.	.	50	350	.	.	12	20	62	370
,,	23	.	.	.	.	105	300	.	.	14	15	119	315
,,	30	10	30	.	.	100	250	.	.	.	.	110	280
Dec.	7	14	9	.	.	90	100	.	.	.	.	104	109
,,	14	.	.	.	.	8	30	.	.	6	36	14	66
,,	21	7	5	.	.	.	.	.	.	2	26	9	31
,,	28	.	.	.	.	.	.	.	.	.	.	.	.
1879.													
Jan.	4	.	.	.	.	.	.	.	.	.	.	.	.
,,	11	56	90	.	.	.	.	.	.	.	.	56	90
,,	18	188	1334	.	.	.	.	.	.	.	.	188	1334
,,	25	290	3078	.	.	.	.	.	.	.	.	290	3078
Feb.	1	304	3428	.	.	.	.	.	.	.	.	304	3428
,,	8	304	104	.	.	.	.	.	.	.	.	304	104
,,	15	125	410	.	.	.	.	.	.	.	.	125	410
,,	22	251	1755	.	.	.	.	.	.	.	.	251	1755
March	1	251	4007	.	.	.	.	.	.	.	.	251	4007
,,	8	204	1220	.	.	.	.	.	.	.	.	204	1220
,,	15	210	921	.	.	.	.	.	.	.	.	210	921
,,	22	199	1783	.	.	.	.	.	.	.	.	199	1783
,,	29	98	1050	.	.	.	.	.	.	.	.	98	1050
April	5	47	433	.	.	.	.	.	.	.	.	47	433
,,	12	10	21	.	.	.	.	.	.	.	.	10	21
,,	19	.	.	.	.	.	.	.	.	.	.	.	.
,,	26	.	.	.	.	.	.	.	.	.	.	.	.
May	3	13	458	.	.	.	.	.	.	.	.	13	458
,,	10	37	38	.	.	.	.	.	.	.	.	37	38
,,	17	?	14	.	.	.	.	.	.	.	.	?	14
,,	24	53	34	?	*3200	.	.	.	.	.	.	53	34
,,	31	71	127	94	276	.	.	.	.	.	.	165	403
June	7	76	59	115	218	92	393	.	.	.	.	283	670
,,	14	80	76	117	539	92	785	.	.	.	.	289	1400
,,	21	71	58	192	139	103	275	.	.	.	.	366	472
,,	28	85	150	236	231	116	715	?	†98	63	92	500	1188
July	5	?	121	214	261	137	814	48	149	95	160	494	1505
,,	12	?	100	225	1234	149	765	45	57	66	135	485	2291
,,	19	83	118	127	1025	169	980	50	135	113	238	542	2496
,,	26	56	124	183	1315	159	1109	44	99	76	178	518	2825
Aug.	2	56	117	163	1296	169	2076	50	166	96	244	534	3899
,,	9	37	136	191	1924	206	1523	46	210	106	550	586	4343
,,	16	49	116	164	829	184	2951	48	117	102	254	547	4267
,,	23	62	124	116	443	182	1963	46	85	94	155	500	2770
,,	30	50	39	113	585	174	972	34	89	85	143	456	1828

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1879.												
Sept. 6 .	50	62	142	971	181	1304	18	75	69	454	460	2866
,, 13 .	.	.	155	944	149	536	29	63	40	102	373	1645
,, 20 .	.	.	191	1254	131	726	26	115	18	129	366	2224
,, 27 .	.	.	155	1003	165	239	21	48	40	75	381	1365
Oct. 4 .	?	26	202	887	142	201	18	74	48	210	410	1398
,, 11 .	17	36	94	318	179	785	.	.	86	204	376	1343
,, 18 .	.	.	129	2949	134	840	.	.	104	400	367	4189
,, 25 .	22	57	180	2985	120	410	.	.	36	28	358	3480
Nov. 1 .	24	68	265	1507	110	160	.	.	148	933	547	2668
,, 8 .	.	.	560	3889	87	448	.	.	37	287	684	4624
,, 15 .	15	10	564	2067	24	70	.	.	175	370	778	2517
,, 22 .	.	.	530	1515	.	.	.	.	96	305	626	1820
,, 29 .	.	.	162	55	5	5	.	.	160	210	327	270
Dec. 6 .	.	.	110	46	.	.	.	.	37	18	147	64
,, 13 .	46	288	82	75	.	.	.	.	.	.	128	363
,, 20 .	186	2722	.	.	.	.	.	.	.	.	186	2722
,, 27 .	202	1075	.	.	.	.	.	.	.	.	202	1075
1880.												
Jan. 3 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 10 .	290	499	.	.	.	.	.	.	.	.	290	499
,, 17 .	310	2053	.	.	.	.	.	.	.	.	310	2053
,, 24 .	364	2624	.	.	.	.	.	.	.	.	364	2624
,, 31 .	19	24	.	.	.	.	.	.	.	.	19	24
Feb. 7 .	307	2928	.	.	.	.	.	.	.	.	307	2928
,, 14 .	210	512	.	.	.	.	.	.	.	.	210	512
,, 21 .	185	558	.	.	.	.	.	.	.	.	185	558
,, 28 .	302	2520	.	.	.	.	.	.	.	.	302	2520
March 6 .	127	829	.	.	.	.	.	.	.	.	127	829
,, 13 .	253	4806	.	.	.	.	.	.	.	.	253	4806
,, 20 .	267	4231	.	.	.	.	.	.	.	.	267	4231
,, 27 .	?	9586	.	.	.	.	.	.	.	.	?	9586
April 3 .	10	.	.	.	.	.	.	.	.	.	10	.
,, 10 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 17 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 24 .	.	.	.	.	.	.	.	.	.	.	.	.
May 1 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 8 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 15 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 22 .	47	20	?	*5090	.	.	.	.	.	.	47	20
,, 29 .	60	179	123	30	.	.	.	.	.	.	183	209
June 5 .	95	275	145	135	96	945	.	.	.	.	336	1355
,, 12 .	102	430	186	487	94	190	.	.	.	.	382	1107
,, 19 .	124	335	236	358	101	340	?	†86	?	*40	461	1033
,, 26 .	126	399	303	1350	114	342	70	174	75	136	688	2401

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1880.													
July	3 .	140	1400	345	2700	125	620	78	370	88	222	776	5312
,,	10 .	113	568	348	3308	122	2650	35	275	148	1118	766	7919
,,	17 .	146	294	182	1767	150	1435	44	316	90	1196	612	5008
,,	24 .	105	210	190	2044	130	1611	42	193	176	429	643	4487
,,	31 .	39	111	192	2254	166	1202	61	235	207	738	665	4540
Aug.	7 .	82	152	210	2822	230	1540	54	161	156	1097	732	5772
,,	14 .	44	111	239	2184	151	704	48	182	139	316	621	3497
,,	21 .	41	57	176	168	179	618	22	40	89	77	507	960
,,	28 .	26	13	122	252	175	1060	21	28	100	148	444	1501
Sept.	4 .	38	15	25	421	219	520	14	35	90	82	386	1073
,,	11 .	20	10	207	258	188	320	1	1	10	3	426	592
,,	18 .	.	.	148	128	154	268	8	21	55	36	365	453
,,	25 .	.	.	299	1052	180	844	.	.	46	75	525	1971
Oct.	2 .	?	18	318	720	154	487	.	.	47	52	519	1277
,,	9 .	13	17	333	220	130	440	.	.	42	65	518	742
,,	16 .	.	.	408	63	123	480	.	.	105	356	636	899
,,	23 .	25	16	380	1220	96	280	.	.	66	304	567	1820
,,	30 .	32	83	302	1081	124	220	.	.	55	130	513	1514
Nov.	6 .	62	125	430	1210	172	890	.	.	333	1274	997	3499
,,	13 .	90	175	230	269	200	1820	.	.	102	409	622	2673
,,	20 .	195	420	162	1146	338	1350	.	.	45	188	740	3104
,,	27 .	131	27	54	.	218	510	.	.	47	85	450	622
Dec.	4 .	171	910	242	1789	220	650	.	.	69	122	702	3471
,,	11 .	?	40	108	939	210	420	.	.	56	129	374	1528
,,	18 .	130	20	110	1540	8	12	.	.	13	2	261	1574
,,	25 .	.	.	105	515	.	.	.	.	.	.	105	515
1881.													
Jan.	1 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	8 .	290	2125	.	.	.	.	.	.	.	.	290	2125
,,	15 .	158	62	.	.	.	.	.	.	.	.	158	62
,,	22 .	407	120	.	.	.	.	.	.	.	.	407	120
,,	29 .	345	565	.	.	.	.	.	.	.	.	345	565
Feb.	5 .	335	793	.	.	.	.	.	.	.	.	335	793
,,	12 .	255	237	.	.	.	.	.	.	.	.	255	237
,,	19 .	297	2740	.	.	.	.	.	.	.	.	297	2740
,,	26 .	315	5540	.	.	.	.	.	.	.	.	315	5540
March	5 .	256	452	.	.	.	.	.	.	.	.	256	452
,,	12 .	158	1562	.	.	.	.	.	.	.	.	158	1562
,,	19 .	180	1489	.	.	.	.	.	.	.	.	180	1489
,,	26 .	?	8419	.	.	.	.	.	.	.	.	?	8419
April	2 .	12	.	.	.	.	.	.	.	.	.	12	.
,,	9 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	16 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	23 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	30 .	.	.	.	.	.	.	.	.	.	.	.	.

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1881.												
May 7	.	.	.	.	.	.	.	.	.	.	.	.
,, 14	.	.	.	.	.	.	.	.	.	.		.
,, 21	.	.	.	.	.	.	.	.	.	.	.	.
,, 28	.	.	?	*1280	.	.	.	.	.	.	.	.
June 4	95	231	152	147	82	342	.	.	.	.	329	720
,, 11	68	32	208	607	103	1580	.	.	.	.	379	2219
,, 18	102	45	276	872	172	1165	.	.	.	.	550	2082
,, 25	97	54	304	441	260	710	.	.	.	.	659	1205
July 2	121	287	250	1311	244	1135	?	132†	.	.	615	2733
,, 9	78	220	269	1645	274	360	53	204	.	.	674	2429
,, 16	117	212	316	1764	187	186	40	101	.	.	660	2263
,, 23	100	110	330	1660	177	2811	40	52	99	81	746	4714
,, 30	73	80	334	1530	236	2536	33	75	98	183	774	4404
Aug. 6	33	33	369	1092	224	2344	33	85	14	5	673	3559
,, 13	42	91	335	1136	170	1968	37	76	98	202	682	3473
,, 20	75	158	72	822	194	3903	21	180	135	612	497	5675
,, 27	26	4	390	917	196	1331	30	122	10	13	652	2587
Sept. 3	.	.	321	749	181	1440	9	55	5	10	516	2254
,, 10	.	.	252	113	144	1121	7	10	10	12	413	1256
,, 17	.	.	248	52	135	1035	2	36	.	.	385	1123
,, 24	.	.	40	56	119	883	2	42	.	.	161	981
Oct. 1	.	.	40	78	118	700	3	44	.	.	161	822
,, 8	.	.	43	16	107	60	.	.	.	.	150	76
,, 15	.	.	60	.	104	226	.	.	.	.	164	226
,, 22	.	.	50	2	66	212	.	.	.	.	71	214
,, 29	.	.	87	422	130	1750	.	.	.	.	217	2172
Nov. 5	34	6	84	64	154	1530	.	.	15	20	287	1620
,, 12	32	5	134	376	194	600	.	.	7	55	367	1036
,, 19	20	.	80	269	160	700	.	.	12	95	272	1064
,, 26	.	.	70	334	150	960	.	.	9	22	229	1316
Dec. 3	.	.	84	224	160	870	.	.	9	7	253	1101
,, 10	31	7	100	766	164	400	.	.	19	61	314	1234
,, 17	46	10	125	1588	152	85	.	.	.	.	323	1683
,, 24	75	67	48	60	.	.	.	.	.	.	123	127
,, 31	121	94	.	.	.	.	.	.	.	.	121	94
1882.												
Jan. 7	108	.	.	.	.	.	.	.	.	.	108	.
,, 14	184	10	.	.	.	.	.	.	.	.	184	10
,, 21	226	790	.	.	.	.	.	.	.	.	226	790
,, 28	236	383	.	.	.	.	.	.	.	.	236	383
Feb. 4	403	1726	.	.	.	.	.	.	.	.	403	1726
,, 11	402	1358	.	.	.	.	.	.	.	.	402	1358
, 18	.	.	.	.	.	.	.	.	.	.	.	.
25	422	3104	.	.	.	.	.	.	.	.	422	3104

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1882.												
March 4	378	1286	.	.	.	.	.	.	.	.	378	1286
,, 11	55	51	.	.	.	.	.	.	.	.	55	51
,, 18	.	.	.	.	.	.	.	.	.	.	.	.
,, 25	.	.	.	.	.	.	.	.	.	.	.	.
April 1	?	125	.	.	.	.	.	.	.	.	.	.
,, 8												
,, 15												
,, 22												
,, 29												
May 6	30	46	.	.	.	.	.	.	.	.	30	46
,, 13	45	34	.	.	.	.	.	.	.	.	45	34
,, 20	45	27	.	.	.	.	.	.	.	.	45	27
,, 27	58	20	?	*2249	.	.	.	.	.	.	58	20
June 3	109	83	186	†445	42	23	.	.	.	.	337	551
,, 10	147	242	356	932	84	10	.	.	.	.	587	1184
,, 17	148	152	390	1189	99	45	?	‡37	.	.	637	1386
,, 24	176	234	487	2807	190	664	57	168	.	.	910	3873
July 1	123	132	570	1956	205	2843	42	79	.	.	940	5010
,, 8	52	52	422	2502	214	1719	33	136	?	§350	721	4409
,, 15	45	69	610	3604	214	1784	34	264	278	350	1181	6071
,, 22	47	88	340	2537	277	1990	39	210	94	431	797	5256
,, 29	40	59	420	3772	357	2367	22	61	12	8	851	6267
Aug. 5	8	50	383	2179	241	1780	24	72	43	206	699	4287
,, 12	6	32	351	2545	185	3454	40	415	52	97	634	6543
,, 19	14	24	326	2449	184	3370	45	271	51	114	620	6228
,, 26	11	9	321	2878	140	2961	39	613	46	118	557	6579
Sept. 2	12	73	315	306	159	313	34	221	5	6	525	919
,, 9	12	55	310	1670	203	2170	51	374	8	15	584	4284
,, 16	11	13	156	2740	188	2502	21	188	4	5	380	5448
,, 23	9	51	158	500	198	2656	24	389	.	.	389	3596
,, 30	8	49	140	429	201	992	23	214	60	150	432	1834
Oct. 7	17	29	126	1086	207	2320	8	22	85	215	443	3672
,, 14	3	.	110	957	214	2894	.	.	58	226	385	4077
,, 21	4	41	110	1085	243	2209	.	.	68	180	425	3515
,, 28	21	11	116	2792	249	5240	.	.	130	930	516	9143
Nov. 4	9	156	40	.	251	2640	.	.	145	437	445	3233
,, 11	12	6	40	.	255	3568	.	.	140	490	447	4064
,, 18	.	.	.	.	244	2205	.	.	130	330	374	2535
,, 25	.	.	.	.	252	2327	.	.	60	165	312	2492
Dec. 2	.	.	.	.	209	684	.	.	63	229	272	913
,, 9	2	2	40	.	40	18	.	.	18	25	100	45
,, 16	21	15	.	.	16	6	.	.	.	.	37	21
,, 23	70	32	.	.	.	.	.	.	.	.	70	32
,, 30	93	67	.	.	.	.	.	.	.	.	93	67

* From 1st January to 31st May.

† 1st to 3rd June. ‡ Up to date. § From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1883.												
Jan. 6	98	585	.	.	.	.	.	.	.	.	98	585
,, 13	182	796	.	.	.	.	.	.	.	.	182	796
,, 20	330	2196	.	.	.	.	.	.	.	.	330	2196
,, 27	246	120	.	.	.	.	.	.	.	.	246	120
Feb. 3	262	87	.	.	.	.	.	.	.	.	262	87
,, 10	132	327	.	.	.	.	.	.	.	.	132	327
,, 17	10	19	.	.	.	.	.	.	.	.	10	19
,, 24	408	1333	.	.	.	.	.	.	.	.	408	1333
Mar. 3	320	16060	.	.	.	.	.	.	.	.	320	16060
,, 10	130	774	.	.	.	.	.	.	.	.	130	774
,, 17	48	339	.	.	.	.	.	.	.	.	48	339
,, 24	57	393	.	.	.	.	.	.	.	.	57	393
,, 31	.	.	.	.	.	.	.	.	.	.	.	.
April 7	.	.	.	.	.	.	.	.	.	.	.	.
,, 14	.	.	.	.	.	.	.	.	.	.	.	.
,, 21	.	.	.	.	.	.	.	.	.	.	.	.
,, 28	.	.	.	.	.	.	.	.	.	.	.	.
May 5	7	5	.	.	.	.	.	.	.	.	7	5
,, 12	13	3	.	.	.	.	.	.	.	.	13	3
,, 19	69	49	.	.	.	.	.	.	.	.	69	49
,, 25	102	135	.	.	.	.	.	.	.	.	102	135
June 2	131	207	?	*1859	.	.	.	.	.	.	131	207
,, 9	176	327	210	624	150	6	.	.	.	.	536	957
,, 16	149	167	409	620	152	208	.	.	.	.	710	995
,, 23	127	112	4 9	982	207	1435	?	†71	.	.	743	2529
,, 30	101	172	340	1041	261	1655	34	78	.	.	736	2946
July 7	102	187	356	934	250	1594	22	56	.	.	730	2771
,, 14	112	229	362	1573	254	2820	32	196	?	*410	760	4818
,, 21	77	41	336	1348	240	1977	21	111	149	236	823	3713
,, 28	50	34	368	2125	213	2074	33	90	27	69	691	4392
Aug. 4	9	14	428	2932	206	2427	28	84	53	95	724	5552
,, 11	55	27	326	928	201	1082	14	36	45	4	641	2077
,, 18	19	32	339	1431	192	1384	7	90	6	2	563	2939
,, 25	42	58	431	1010	224	1052	17	75	16	145	730	2340
Sept. 1	.	.	325	1394	209	1692	31	246	10	40	575	3372
,, 8	6	8	332	1460	199	1936	19	102	10	46	566	3553
,, 15	23	11	191	716	189	2173	27	227	10	87	440	3214
,, 22	12	2	112	159	207	1506	7	57	10	.	348	1724
,, 29	.	.	113	977	206	1743	.	.	4	3	323	2723
Oct. 6	.	.	119	3864	234	3647	.	.	60	120	413	7631
,, 13	.	.	122	1624	215	2252	.	.	46	110	383	3986
,, 20	.	.	124	617	204	8	.	.	30	65	358	690
, 27	.	.	121	1017	196	906	.	.	22	48	339	1971

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1883.													
Nov.	3 .	.	.	142	3505	209	1158	.	.	65	135	416	4798
,,	10 .	.	.	155	738	180	826	.	.	76	105	411	1669
,,	17 .	.	.	175	1310	164	165	.	.	60	112	399	1587
,,	24 .	.	.	79	135	120	38	.	.	30	20	229	193
Dec.	1 .	2	9	195	63	90	333	.	.	45	112	332	517
,,	8 .	17	33	112	1479	45	12	.	.	65	42	239	1566
,,	15 .	8	8	.	.	.	.	.	.	.	.	8	8
,,	22 .	48	55	20	.	.	.	.	.	.	.	68	55
,,	29 .	89	47	.	.	.	.	.	.	.	..	89	47
1884.													
Jan.	5 .	90	182	.	.	.	.	.	.	.	.	90	182
,,	12 .	76	35	.	.	.	.	.	.	.	.	76	35
,,	19 .	246	2271	.	.	.	.	.	.	.	.	246	2271
,,	26 .	117	255	.	.	.	.	.	.	.	.	117	255
Feb.	2 .	70	70	.	.	.	.	.	.	.	.	70	70
,,	9 .	222	559	.	.	.	.	.	.	.	.	222	559
,,	16 .	255	1067	.	.	.	.	.	.	.	.	255	1067
,,	23 .	245	2063	.	.	.	.	.	.	.	.	245	2063
March	1 .	257	4776	.	.	.	.	.	.	.	.	257	4776
,,	8 .	198	1802	.	.	.	.	.	.	.	.	198	1802
,,	15 .	71	238	.	.	.	.	.	.	.	.	71	238
,,	22 .	82	188	.	.	.	.	.	.	.	.	82	188
,,	29 .	72	1052	.	.	.	.	.	.	.	.	72	1052
April	5 .	40	6	.	.	.	.	.	.	.	.	40	6
,,	12 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	19 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	26 .	.	.	.	.	.	.	.	.	.	.	.	.
May	3 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	10 .	49	21	.	.	.	.	.	.	.	.	49	21
,,	17 .	76	116	.	.	.	.	.	.	.	.	76	116
,,	23 .	107	279	.	.	.	.	.	.	.	.	107	279
,,	31 .	125	93	?	*1766	.	.	.	.	.	.	125	93
June	7 .	98	102	143	368	149	1060	.	.	.	.	390	1530
,,	14 .	122	339	205	232	235	480	?	†87	.	.	562	1051
,,	21 .	141	199	316	811	233	1244	22	28	.	.	712	2282
,,	28 .	150	326	420	952	238	1284	28	49	.	.	836	2611
July	5 .	113	171	390	623	258	1086	36	108	?	*552	797	1988
,,	12 .	119	238	330	775	284	990	19	104	134	240	886	2347
,,	19 .	68	202	370	1432	250	490	68	159	140	190	896	2473
,,	26 .	38	105	348	3150	227	1186	37	134	56	166	706	4741
Aug.	2 .	38	89	428	2692	184	609	41	284	76	230	767	3904
,,	9 .	43	306	398	871	216	1288	26	286	79	178	762	2930
,,	16 .	52	66	280	1651	208	860	49	331	108	653	697	3561
,,	23 .	44	92	270	1648	190	1546	32	136	106	286	642	3708
,,	30 .	28	26	204	1629	206	1310	45	144	67	176	550	3285

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1884.												
Sept. 6 .	10	26	172	40	177	248	44	69	81	187	484	570
,, 13 .	21	53	179	269	188	597	35	89	63	134	486	1142
,, 20 .	.	.	142	295	184	792	15	8	32	19	373	1114
,, 27 .	.	.	142	321	188	80	.	.	10	.	340	401
Oct. 4 .	?	9	150	321	190	63	.	.	10	10	350	403
,, 11 .	4	9	22	806	164	456	.	.	128	149	318	1420
,, 18 .	6	82	244	3929	170	69	.	.	131	590	551	4670
,, 25 .	6	66	266	4578	134	14	.	.	84	90	490	4748
Nov. 1 .	.	.	266	20	113	4	.	.	75	35	454	59
,, 8 .	.	.	120	812	.	.	.	.	63	50	183	862
,, 15 .	.	.	195	3006	34	.	.	.	54	95	283	3101
,, 22 .	26	196	126	410	30	.	.	.	76	185	258	791
,, 29 .	8	132	46	165	26	.	.	.	82	101	162	398
Dec. 6 .	.	.	.	.	.	.	.	.	4	5	4	5
,, 13 .	16	87	.	.	.	.	.	.	.	.	16	87
,, 20 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 27 .	66	329	.	.	.	.	.	.	40	240	106	569
1885.												
Jan. 3 .	6	99	.	.	.	.	.	.	.	.	6	99
,, 10 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 17 .	94	34	.	.	.	.	.	.	.	.	94	34
,, 24 .	128	530	.	.	.	.	.	.	.	.	128	530
,, 31 .	84	81	.	.	.	.	.	.	.	.	84	81
Feb. 7 .	189	382	.	.	.	.	.	.	.	.	189	382
,, 14 .	395	712	.	.	.	.	.	.	.	.	395	712
,, 21 .	325	4102	.	.	.	.	.	.	.	.	325	4102
,, 28 .	120	559	.	.	.	.	.	.	.	.	120	559
March 7 .	271	1666	.	.	.	.	.	.	.	.	271	1666
,, 14 .	289	12033	.	.	.	.	.	.	.	.	289	12033
,, 21 .	160	360	.	.	.	.	.	.	.	.	160	360
,, 28 .	35	35	.	.	.	.	.	.	.	.	35	35
April 4 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 11 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 18 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 25 .	.	.	.	.	.	.	.	.	.	.	.	.
May 2 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 9 .	10	34	.	.	.	.	.	.	.	.	10	34
,, 16 .	17	8	.	.	.	.	.	.	.	.	17	8
,, 23 .	57	95	.	.	.	.	.	.	.	.	57	95
,, 30 .	105	160	?	*2363	.	.	.	.	.	.	105	160
June 6 .	114	385	124	109	204	2117	.	.	.	.	442	2611
,, 13 .	131	271	209	955	206	1744	?	†142	.	.	546	2970
,, 20 .	108	259	312	787	214	1214	40	82	?	*1050	674	2342
,, 27 .	145	303	296	677	215	2112	48	94	140	190	844	3376

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1885.													
July	4	117	117	402	1307	216	1671	35	86	148	250	918	3431
,,	11	89	135	356	1263	224	1470	45	88	120	170	834	3126
,,	18	101	225	330	2421	264	1745	13	198	63	111	771	4700
,,	25	86	185	292	1886	236	1399	42	94	82	109	738	3673
Aug.	1	72	104	284	962	222	959	42	91	84	143	704	2259
,,	8	81	152	289	1349	214	980	42	59	58	62	684	2602
,,	15	40	48	287	1793	221	905	48	96	56	82	652	2924
,,	22	38	62	288	2348	102	2276	55	217	78	200	561	5103
,,	29	20	199	264	789	205	1361	16	19	20	34	525	2402
Sept.	5	8	11	242	1583	221	975	24	48	151	284	646	2901
,,	12	6	7	212	2428	212	1643	3	6	103	198	536	4282
,,	19	.	.	321	4790	203	1429	14	11	34	50	572	6280
,,	26	.	.	140	121	.	.	22	30	54	130	214	281
Oct.	3	.	.	210	2930	103	1541	.	.	60	45	373	4516
,,	10	.	.	222	4764	214	3050	.	.	130	1954	566	9768
,,	17	.	.	223	250	196	244	.	.	165	240	584	734
,,	24	.	.	232	967	118	9	.	.	185	574	535	1550
,,	31	.	.	72	.	110	3	.	.	105	275	287	278
Nov.	7	.	.	27	.	110	.	.	.	80	140	217	140
,,	14	.	.	12	.	.	.	.	.	75	206	87	206
,,	21	.	.	.	.	.	.	.	.	80	140	80	140
,,	28	.	.	.	.	.	.	.	.	50	72	50	72
Dec.	5	.	.	4	.	.	.	.	.	7	4	11	4
,,	12	.	.	.	.	.	.	.	.	100	190	100	190
,,	19	.	.	.	.	.	.	.	.	20	147	20	147
,,	26	38	227	.	.	.	.	.	.	24	135	62	362
1886.													
Jan.	2	.	.	.	.	.	.	.	.	.	.	.	.
,,	9	55	4	.	.	.	.	.	.	.	.	55	4
,,	16	.	.	.	.	.	.	.	.	.	.	.	.
,,	23	66	65	.	.	.	.	.	.	.	.	66	65
,,	30	80	115	.	.	.	.	.	.	.	.	80	115
Feb.	6	92	367	.	.	.	.	.	.	.	.	92	367
,,	13	201	438	.	.	.	.	.	.	.	.	201	438
,,	20	186	298	.	.	.	.	.	.	.	.	186	298
,,	27	285	1121	.	.	.	.	.	.	.	.	285	1121
March	6	292	590	.	.	.	.	.	.	.	.	292	590
,,	13	257	1237	.	.	.	.	.	.	.	.	257	1237
,,	20	176	510	.	.	.	.	.	.	.	.	176	510
,,	27	39	15	.	.	.	.	.	.	.	.	39	15
April	3	.	.	.	.	.	.	.	.	.	.	.	.
,,	10	.	.	.	.	.	.	.	.	.	.	.	.
,,	17	.	.	.	.	.	.	.	.	.	.	.	.
,,	24	.	.	.	.	.	.	.	.	.	.	.	.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1886.												
May 1 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 8 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 15 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 22 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 29 .	24	27	?	*4607	.	.	.	.	.	.	24	27
June 5 .	30	9	272	813	130	581	.	.	.	.	432	1403
,, 12 .	76	41	216	180	188	756	.	.	.	.	480	977
,, 19 .	55	15	183	154	186	451	.	.	.	.	424	620
,, 26 .	96	128	350	928	174	1133	?	†15	.	.	620	2189
July 3 .	108	190	380	367	182	1502	21	29	?	*125	691	2088
,, 10 .	116	403	276	815	198	533	51	86	121	260	762	2097
,, 17 .	97	134	292	720	216	912	33	56	94	180	732	2002
,, 24 .	93	186	200	144	236	1049	46	74	57	114	632	1567
,, 31 .	87	232	202	638	201	596	56	105	97	59	643	1630
Aug. 7 .	82	145	274	1294	198	874	51	59	72	141	677	2513
,, 14 .	69	95	300	664	196	1251	45	65	47	82	657	2157
,, 21 .	54	111	290	1093	194	1150	48	158	96	232	682	2744
,, 28 .	37	44½	282	1268	193	1672	25	28	105	148½	642	3161
Sept. 4 .	24	44	200	1915	188	1082	8	2½	19	20	439	3063½
,, 11 .	11	½	100	94	190	11	.	.	5	½	306	106
,, 18 .	8	8½	130	67	102	552	5	10	16	22	261	659½
,, 25 .	14	41	180	83	113	256	4	.	22	33	333	413
Oct. 2 .	.	.	180	525	162	120	.	.	45	48	387	693
,, 9 .	21	59	185	318	168	45	.	.	284	1138	658	1560
,, 16 .	22	16	110	146	168	63	.	.	215	163	515	388
,, 23 .	22	39	311	647	168	111	.	.	190	340	691	1137
,, 30 .	17	92	223	934	171	43	.	.	170	270	581	1339
Nov. 6 .	.	.	108	360	164	.	.	.	130	180	402	540
,, 13 .	14	14	124	523	130	46	.	.	110	130	378	713
,, 20 .	4	4	234	565	130	35	.	.	85	115	453	719
,, 27 .	18	10	400	1666	130	95	.	.	110	145	658	1916
Dec. 4 .	13	18	220	2305	55	143	.	.	95	148	383	2614
,, 11 .	14	15	20	135	.	.	.	.	.	.	34	150
,, 18 .	.	.	315	5350	.	.	.	.	85	340	400	5690
,, 25 .	3	4	.	.	.	.	.	.	.	.	3	4
1887.												
Jan. 1 .	18	.	.	.	.	.	.	.	.	.	18	.
,, 8 .	12	.	.	.	.	.	.	.	.	.	12	.
,, 15 .	29	9	.	.	.	.	.	.	.	.	29	9
,, 22 .	29	19	.	.	.	.	.	.	.	.	29	19
,, 29 .	24	20	.	.	.	.	.	.	.	.	24	20
Feb. 5 .	21	18	.	.	.	.	.	.	.	.	21	18
,, 12 .	50	132	.	.	.	.	.	.	.	.	50	132
,, 19 .	70	188	.	.	.	.	.	.	.	.	70	188
,, 26 .	113	416	.	.	.	.	.	.	.	.	113	416

* From 1st January.

† Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1887.												
March 5 .	110	5084	.	.	.	.	.	.	.	.	110	5084
,, 12 .	144	3707	.	.	.	.	.	.	.	.	144	3707
,, 19 .	53	283	.	.	.	.	.	.	.	.	53	283
,, 26 .	.	.	.	.	.	.	.	.	.	.	.	.
April 2 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 9 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 16 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 23 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 30 .	.	.	.	.	.	.	.	.	.	.	.	.
May 7 .	.	.	.	.	118	525	.	.	.	.	118	525
,, 14 .	.	.	.	.	126	90	.	.	.	.	126	90
,, 21 .	.	.	.	.	136	34	.	.	.	.	136	34
,, 28 .	7	15	?	*6210	152	383	.	.	.	.	159	398
June 4 .	42	36	92	33	178	731	.	.	.	.	312	800
,, 11 .	58	113	146	47	222	940	.	.	.	.	426	1100
,, 18 .	59	77	212	429	260	720	.	.	.	.	531	1226
,, 25 .	81	90	300	496	262	575	?	†18	.	.	643	1161
July 2 .	77	115	320	258	258	611	24	18	?	*250	679	1002
,, 9 .	82	240	420	1030	240	268	19	58½	112	55	873	1651½
,, 16 .	99	176	350	1272	245	777	37	183½	83	339½	814	2748
,, 23 .	65	125	289	1543	255	1769	43	165	113	576½	765	4178½
,, 30 .	37	62½	205	625½	255	408	45	108½	192	949	734	2153½
Aug. 6 .	58	228½	166	518	255	1289	44	177	93	420	616	2632½
,, 13 .	50	95	220	911½	255	901	40	148½	3001	140	865	3196
,, 20 .	47	120½	182	821	255	392	61	361	116	401	661	2095½
,, 27 .	15	20½	180	1080	243	94	57	148½	3401	004	835	2347
Sept. 3 .	11	4½	125	355	253	413	28	82½	92	305½	509	1160½
,, 10 .	11	16	176	1236	243	159½	38	45	55	145½	523	1602
,, 17 .	8	2	204	2883	233	716	10	52	76	423½	531	4076½
,, 24 .	4	12	207	5149	233	1349	13	70	8	86½	465	6667
Oct. 1 .	.	.	201	550	225	215	.	.	112	720	538	1485
,, 8 .	.	.	2001	065	204	20	.	.	105	270	509	1355
,, 15 .	.	.	76	65	196	333	.	.	150	320	422	718
,, 22 .	.	.	224	2054	176	184	.	.	210	520	610	2758
,, 29 .	7	153	238	122	176	244	.	.	165	540	586	1059
Nov. 5 .	23	59	384	3123	178	168	.	.	80	240	665	3590
,, 12 .	14	36	666	7057	168	30	.	.	200	690	1048	7813
,, 19 .	16	6	224	42	158	.	.	.	65	180	463	228
,, 26 .	4	2	380	447	104	.	.	.	55	130	543	579
Dec. 3 .	.	.	5001	875	60	22	.	.	85	550	645	2447
,, 10 .	16	31	4101	229	30	.	.	.	35	90	491	1350
,, 17 .	16	32	280	17	.	.	.	.	.	.	296	49
,, 24 .	7	4	520	992	.	.	.	.	12	30	539	1026
,, 31 .	7	3	.	.	.	.	.	.	.	.	7	3

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1888.													
Jan.	7	7	13	.	.	.	.	.	.	.	.	7	13
,,	14	47	317	.	.	.	.	.	.	.	.	47	317
,,	21	37	65	.	.	.	.	.	.	.	.	37	65
,,	31	30	55	.	.	.	.	.	.	.	.	30	55
Feb.	4	22	52	.	.	.	.	.	.	.	.	22	52
,,	11	26	133	.	.	.	.	.	.	.	.	26	133
,,	18	38	537	.	.	.	.	.	.	.	.	38	537
,,	25	51	1405	.	.	.	.	.	.	.	.	51	1405
March	3	147	6786	.	.	.	.	.	.	.	.	147	6786
,,	10	23	152	.	.	.	.	.	.	.	.	23	152
,,	17	.	.	.	.	.	.	.	.	.	.	.	.
,,	24	.	.	.	.	.	.	.	.	.	.	.	.
,,	31	.	.	.	.	.	.	.	.	.	.	.	.
April	7	.	.	.	.	.	.	.	.	.	.	.	.
,,	14	.	.	.	.	.	.	.	.	.	.	.	.
,,	21	.	.	.	.	.	.	.	.	.	.	.	.
,,	28	.	.	.	.	.	.	.	.	.	.	.	.
May	5	.	.	.	.	.	.	.	.	.	.	.	.
,,	12	.	.	.	.	.	.	.	.	.	.	.	.
,,	19	.	.	.	.	.	.	.	.	.	.	.	.
,,	26	37	66	.	.	.	.	.	.	.	.	37	66
June	2	60	24		*10890	.	.	.	.	.	.	60	24
,,	9	54	53	100	20	152	18	.	.	.	.	306	91
,,	16	69	38	133	46	198	248	?	†86	.	.	400	332
,,	23	79	73	139	116	235	184	53	123	?	*697	506	496
,,	30	83	349	269	522	268	661	78	479	105	377	803	2388
July	7	68	355	380	1088	2511	655	82	276	108	540	889	3914
,,	14	57	585	376	1008	2491	518	81	370	136	1010	899	4491
,,	21	72	272	326	1634	2362	236	33	67	113	169	780	4378
,,	28	65	116	340	960	2271	738	83	498	96	1171	811	4483
Aug.	4	48	192	162	1959	2261	961	59	366	180	1233	675	5711
,,	11	40	80_3	165	821½	2172	608½	56	326½	138	1176¾	616	5013½
,,	18	29	6_3	190	1502	2112	237	57	240½	176	843	661	4885½
,,	25	27	3	296	388	196	1073	51	139	55	162½	625	1795½
Sept.	1	27	35¾	350	1678½	178	760½	12	55½	114	600	681	3130¼
,,	8	5	1	266	558	178	592½	15	20¾	69	194	533	1366¼
,,	15	.	.	272	1425	178	1711½	18	21¾	198	795	666	2953¼
,,	22	.	.	204	100¾	170	64	15	.	14	3½	403	168¼
;,	29	3	7	93	195½	93	551	12	2	3	3	204	758½
Oct.	6	12	43	264	908¾	92	360½	.	.	23	26¼	391	1338½
,,	13	14	77	210	2204	167	349½	.	.	85	312	476	2942½
,,	20	2	16	250	1372	180	267	.	.	69	102	501	1757
,,	27	15	13	223	218	162	115	.	.	55	50	455	396

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans.
1888.													
Nov.	3 .	.	.	226	1465	162	.	.	.	43	65	431	1530
,,	10 .	.	.	.	.	120	.	.	.	.	.	120	.
,,	17 .	.	.	216	648	112	260	.	.	25	43	353	951
,,	24 .	.	.	90	146	112	.	.	.	6	13	208	159
Dec.	1 .	.	.	268	2753	94	89	.	.	45	250	407	3092
,,	8 .	.	.	270	1797	94	.	.	.	25	50	389	1847
,,	15 .	40	665	390	2388	86	.	.	.	15	33	531	3086
,,	22 .	54	172	380	2307	.	.	.	.	.	.	434	2479
,,	29 .	52	76	180	250	.	.	.	.	.	.	232	326
1889.													
Jan.	5 .	25	55	.	.	.	.	.	.	.	.	25	55
,,	12 .	48	233	.	.	.	.	.	.	.	.	48	233
,,	19 .	39	61	.	.	.	.	.	.	.	.	39	61
,,	26 .	66	526	.	.	.	.	.	.	.	.	66	526
Feb.	2 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	9 .	92	280	.	.	.	.	.	.	.	.	92	280
,,	16 .	4	9	.	.	.	.	.	.	.	.	4	9
,,	23 .	121	2266	.	.	.	.	.	.	.	.	121	2266
March	2 .	155	6426	.	.	.	.	.	.	.	.	155	6426
,,	9 .	48	745	.	.	.	.	.	.	.	.	48	745
,,	16 .	6	14	.	.	.	.	.	.	.	.	6	14
,,	23 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	30 .	.	.	.	.	.	.	.	.	.	.	.	.
April	6 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	13 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	20 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	27 .	.	.	.	.	.	.	.	.	.	.	.	.
May	4 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	11 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	18 .	11	32	.	.	.	.	.	.	.	.	11	32
,,	25 .	46	61	.	.	.	.	.	.	.	.	46	61
June	1 .	44	46	?	*7534	.	.	?	64	.	.	44	110
,,	8 .	49	50½	124	205	220	486½	61	159¾	.	.	454	901¾
,,	15 .	77	157½	183	590	250	356½	71	89½	.	.	581	1193½
,,	22 .	92	145½	110	266	142	538	65	159½	?	*42	409	1109
,,	29 .	77	124	110	508	258	449	87	247½	125	452	657	1780½
July	6 .	78	289	180	1285	233	55	72	161¼	126	260	689	2050¼
,,	13 .	55	89½	132	790½	223	1862½	59	58½	120	156	589	2957
,,	20 .	63	183¾	148	705	220	2504½	75	457½	125	552	631	4402¾
,,	27 .	48	61¼	120	340	219	1942	79	181½	64	425½	530	2950¼
Aug.	3 .	52	98¾	59	564	208	1397½	56	157	115	868½	490	3085¾
,,	10 .	43	30	62	331¾	208	944	50	122¾	106	673	469	2101½
,,	17 .	6	13¼	61	369¼	187	676½	46	149	167	914½	467	2122½
,,	24 .	8	3	42	422	206	594	32	32¼	113	305	401	1356¼
,,	31 .	3	1½	44	933¾	203	1655	14	15	118	707¼	382	3312½

* From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1889.												
Sept. 7 .	.	.	30	88	187	994½	8	2½	30	56	255	1141
,, 14 .	.	.	5	30	203	207½	.	.	56	56½	264	294
,, 21 .	.	.	8	212½	92	816½	.	.	7	14½	107	1043½
,, 28 .	.	.	85	2061½	188	1825	1	10½	294	1100	568	4997
Oct. 5 .	.	.	90	1277	159	3237	.	.	248	514	497	5028
,, 12 .	.	.	93	1772	159	1060	.	.	17	129½	269	2961½
,, 19 .	.	.	180	286	160	2738	.	.	217	670	557	3694
,, 26 .	.	.	125	2205	198	1671	.	.	32	238	355	4114
Nov. 2 .	.	.	157	32	198	1419	.	.	60	180	415	1631
,, 9 .	.	.	146	1760	198	485	.	.	40	20¾	384	2265¾
,, 16 .	.	.	155	1370	206	1371	.	.	45	110	406	2851
,, 23 .	8	140	206	4895	206	493	.	.	40	364	460	5892
,, 30 .	34	457	191	137	140	87	.	.	35	25	400	706
Dec. 7 .	46	442	202	44	.	.	.	.	20	15	268	501
,, 14 .	62	586	283	930	.	.	.	.	.	.	345	1516
,, 21 .	58	18	132	939	.	.	.	.	.	.	190	957
,, 28 .	30	24	88	23	.	.	.	.	.	.	118	47
1890.												
Jan. 4 .	16	17	.	.	.	.	.	.	.	.	16	17
,, 11 .	41	258	.	.	.	.	.	.	.	.	41	258
,, 18 .	5	.	.	.	.	.	.	.	.	.	5	.
,, 25 .	12	3	.	.	.	.	.	.	.	.	12	3
Feb. 1 .	55	18	.	.	.	.	.	.	.	.	55	18
,, 8 .	88	419	.	.	.	.	.	.	.	.	88	419
,, 15 .	93	1931	.	.	.	.	.	.	.	.	93	1931
,, 22 .	107	559	.	.	.	.	.	.	.	.	107	559
March 1 .	163	4011	.	.	.	.	.	.	.	.	163	4011
,, 8 .	174	978	.	.	.	.	.	.	.	.	174	978
,, 15 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 22 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 29 .	.	.	.	.	.	.	.	.	.	.	.	.
April 5 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 12 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 19 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 26 .	.	.	.	.	.	.	.	.	.	.	.	.
May 3 .	16	10	.	.	.	.	.	.	.	.	16	10
, 10 .	22	8½	.	.	.	.	.	.	.	.	22	8½
,, 17 .	28	9½	.	.	.	.	.	.	.	.	28	9½
,, 24 .	24	4½	.	.	.	.	?	194†	.	.	24	4½
,, 31 .	34	17½	?	*12499	.	.	23	24½	.	.	57	42
June 7 .	34	9	121	23	257	160	37	8½	.	.	449	200½
,, 14 .	60	32¾	165	49	297	205	40	5½	?	*276½	562	292¼
,, 21 .	38	68¾	275	401	276	258	56	38¼	22	24	667	790
,, 28 .	51	61½	350	684	276	1313	34	30½	20	32	731	2121

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1890.													
July	5	54	332	280	1055	276	2213	44	46	106	211	760	3857
,,	12	65	435	281	1152	276	3124	56	156¼	118	499¼	796	5366½
,,	19	89	197½	400	673½	250	3006	57	150	116	231¼	912	4258¼
,,	26	63	197¼	146	592	234	1090	59	142¾	103	1149½	605	3171½
Aug.	2	50	123	100	54½	118	2870	48	96	209	3911	525	7054½
,,	9	48	82¾	35	73	253	2598	47	87¼	125	2157½	508	4998½
,,	16	25	28	10	10½	254	3373½	36	31½	102	1143	427	4586½
,,	23	9	12	17	69	246	1482	19	19	66	999	357	2581
,,	30	.	.	8	4	234	800½	26	24	302	4313	570	5141½
Sept.	6	.	.	5	8	98	874½	3	7	121	635½	227	1525
,,	13	.	.	5	4	98	1497½	2	4½	120	1007½	225	2513½
,,	20	.	.	.	.	188	1161½	.	.	70	875	258	2036½
,,	27	.	.	.	.	88	276	1	2	14	30½	103	308½
Oct.	4	.	.	112	47½	234	.	.	.	42	82	388	129½
,,	11	.	.	122	179	223	792	.	.	65	98½	410	1069½
,,	18	.	.	140	112	188	698	.	.	51	101	379	911
,,	25	.	.	240	2527	184	1492	.	.	70	204	494	4223
Nov.	1	.	.	264	78	184	303	.	.	30	30	478	411
,,	8	22	139	333	4419	179	711	.	.	27	43	561	5312
,,	15	.	.	242	210	179	184	.	.	20	30	441	424
,,	22	8	.	263	424	179	1151	.	.	65	280	515	1855
,,	29	44	474	228	.	179	1417	.	.	42	240	493	2131
Dec.	6	47	637	124	.	179	1356	.	.	35	55	385	2048
,,	13	139	2276	95	.	164	1336	.	.	28	50	426	3662
,,	20	184	5288	45	.	104	1595	.	.	12	40	345	6923
,,	27	132	535	164	105	104	954	.	.	.	.	400	1594
1891.													
Jan.	3	75	247	.	.	.	.	.	.	.	.	75	247
,,	10	144	1545	.	.	.	.	.	.	.	.	144	1545
,,	17	48	32	.	.	.	.	.	.	.	.	48	32
,,	24	.	.	.	.	.	.	.	.	.	.	.	.
,,	31	66	30	.	.	.	.	.	.	.	.	66	30
Feb.	7	92	96	.	.	.	.	.	.	.	.	92	96
,,	14	124	23	.	.	.	.	.	.	.	.	124	23
,,	21	224	4875	.	.	.	.	.	.	.	.	224	4875
,,	28	225	53	.	.	.	.	.	.	.	.	225	53
March	7	.	.	.	.	.	.	.	.	.	.	.	.
,,	14	.	.	.	.	.	.	.	.	.	.	.	.
,,	21	.	.	.	.	.	.	.	.	.	.	.	.
,,	28	.	.	.	.	.	.	.	.	.	.	.	.
April	4	.	.	.	.	.	.	.	.	.	.	.	.
,,	11	.	.	.	.	.	.	.	.	.	.	.	.
,,	18	.	.	.	.	.	.	.	.	.	.	.	.
,,	25	.	.	.	.	.	.	.	.	.	.	.	.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1891.												
May 2 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 9 .	?	15	.	.	.	.	.	.	.	.	?	15
,, 16 .	24	24	.	.	.	.	.	.	.	.	24	24
,, 23 .	45	37¼	.	.	.	.	?	*35	.	.	45	37¼
,, 30 .	71	164½	?	†12845	.	.	33	22	.	.	104	186½
June 6 .	50	94	44	71	259	779	42	56	.	.	395	1000
,, 13 .	85	120½	150	1143	259	657	67	184½	.	.	561	2105
,, 20 .	84	205¼	181	1585	260	365	77	122¼	?	278†	602	2277½
,, 27 .	82	193½	255	1320	252	358	92	429½	110	792	791	3093
July 4 .	81	265	216	1571	252	1821	101	253¾	120	639	770	4549¾
,, 11 .	71	687½	250	3069	252	1562	93	211¾	90	1025	756	6555¼
,, 18 .	62	306½	214	1784	217	2152	81	224	101	1126	675	5592½
,, 25 .	52	113½	180	1330	213	1965	85	216¼	91	962	621	4586¾
Aug. 1 .	42	74½	170	2222	213	2783	77	197¾	105	1012½	607	6289¾
,, 8 .	16	22¼	58	940	212	1069¼	85	260½	78	600	449	2892
,, 15 .	21	33½	67	892½	214	748	51	184½	102	488	455	2346½
,, 22 .	15	8½	68	292	215	996	28	58½	83	441	409	1796
,, 29 .	12	1½	40	284	212	970½	8	23½	72	746½	344	2026
Sept. 5 .	16	14½	30	120½	212	426½	6	20	47	148½	311	730
,, 12 .	.	.	4	6½	212	1082	4	22	60	315	280	1425½
,, 19 .	2	3	.	.	212	988¾	2	14¾	34	168¼	250	1174¾
,, 26 .	.	.	16	19	212	1142	1	6	55	201¼	284	1368¼
Oct. 3 .	.	.	20	87	212	792	.	.	35	25	267	904
,, 10 .	.	.	14	11¼	250	883	.	.	31	48	295	942¼
,, 17 .	.	.	21	252	250	1016	.	.	30	38	301	1306
,, 24 .	.	.	70	390	284	4000	.	.	35	135	389	4525
,, 31 .	24	299	136	504	284	2697	.	.	40	230	484	3730
Nov. 7 .	19	171	73	219	300	5001	.	.	105	1472	497	6863
,, 14 .	65	32	22	.	300	324	.	.	35	28	422	384
,, 21 .	53	460	14	40	284	1593	.	.	40	353	391	2446
,, 28 .	70	300	8	.	286	4120	.	.	38	127	402	4547
Dec. 5 .	77	376	.	.	266	958	.	.	20	60	363	1394
,, 12 .	8	36	.	.	261	1471	.	.	20	22	289	1529
,, 19 .	120	1775	.	.	261	1015	.	.	15	32	396	2822
,, 26 .	110	759	.	.	261	2240	.	.	.	.	371	2999
,, to 31 .	.	.	.	.	261	2253	.	.	.	.	261	2253
1892.												
Jan. 2 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 9 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 16 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 23 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 30 .	.	.	.	.	.	.	.	.	.	.	.	.
Feb. 6 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 13 .	36	187	.	.	.	.	.	.	.	.	36	187
,, 20 .	46	995	.	.	.	.	.	.	.	.	46	995
,, 27 .	36	395	.	.	.	.	.	.	.	.	36	395

* Up to date. † From 1st January.

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1892.												
March 5 .	65	1572	.	.	.	.	.	.	.	.	65	1572
,, 12 .	34	164	.	.	.	.	.	.	.	.	34	164
,, 19 .	.	.	?	*2193	.	.	.	.	.	.	.	.
,, 26 .	.	.	.	.	.	.	.	.	.	.	.	.
April 2 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 9 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 16 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 23 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 30 .	16	21½	.	.	.	.	.	.	.	.	16	21½
May 7 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 14 .	28	9	.	.	.	.	.	.	.	.	28	9
,, 21 .	30	16	.	.	.	.	.	.	.	.	30	16
,, 28 .	56	235	.	.	.	.	.	13	.	.	56	248
June 4 .	61	163	54	54	.	.	19	29	.	.	134	246
,, 11 .	75	43	74	133	258	1372	60	35¾	.	.	467	1583¾
,, 18 .	82	208	135	431	262	709	66	114½	?	145†	545	1462½
,, 25 .	84	256	189	1039	266	1118	74	104¾	96	160	709	2677¾
July 2 .	85	519	225	1160	264	1310	82	183½	128	220	784	3392½
,, 9 .	63	123	203	1654	266	1502	40	114¼	120	252	692	3645¼
,, 16 .	84	186	200	2099	242	1096	54	80¾	90	127½	670	3589¼
,, 23 .	75	100	253	1962	227	4055½	69	157¼	72	244	696	6518¾
,, 30 .	66	121	171	3441	235	2552½	56	87¾	117	199½	645	6401¾
Aug. 6 .	16	9	23	1067	266	4330	47	122½	75	162¾	427	5691¾
,, 13 .	.	.	17	849¾	266	1805	31	17¾	44	191½	358	2864
,, 20 .	.	.	20	47½	256	2490½	18	6½	56	239½	350	2784
,, 27 .	.	.	15	41¼	247	2503	13	40	80	129	355	2713¼
Sept. 3 .	.	.	12	1	243	1722	.	.	23	79½	278	1802½
,, 10 .	.	.	4	2¼	267	2296½	.	.	26	73	297	2371¾
,, 17 .	.	.	9	13	257	1650	.	.	23	83½	289	1746½
,, 24 .	.	.	6	21	267	2038	.	.	37	133	300	2192
Oct. 1 .	.	.	.	.	254	700	.	.	30	65	284	765
,, 8 .	.	.	40	188	243	1449	.	.	20	40¼	303	1677¼
,, 15 .	.	.	66	380	266	978	.	.	27	45	359	1403
,, 22 .	.	.	88	739	280	1014	.	.	30	102	398	1855
,, 29 .	.	.	88	287	280	200	.	.	30	35	398	522
Nov. 5 .	.	.	24	25	266	679	.	.	25	20	315	724
,, 12 .	.	.	64	99	266	1237	.	.	20	10	350	1346
,, 19 .	.	.	60	20	268	211	.	.	15	26	343	257
,, 26 .	.	.	66	40	268	1250	.	.	15	80	349	1370
Dec. 3 .	.	.	42	.	268	400	.	.	10	.	320	400
,, 10 .	.	.	52	166	268	1000	.	.	10	10	330	1176
,, 17 .	.	.	32	11	268	2740	.	.	.	.	300	2751
,, 24 .	.	.	.	.	260	2000	.	.	.	.	260	2000
,, 31 .	34	65	.	.	240	1000	.	.	.	.	274	1065

* From 1st January to 15th March. † From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1893.												
Jan. 7 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 14 .	6	.	.	.	.	.	.	.	.	.	6	.
,, 21 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 28 .	.	.	.	.	.	.	.	.	.	.	.	.
Feb. 4 .	5	34	.	.	.	.	.	.	.	.	5	34
,, 11 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 18 .	23	175	.	.	.	.	.	.	.	.	23	175
,, 25 .	104	245	.	.	.	.	.	.	.	.	104	245
March 4 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 11 .	5	.	.	.	.	.	.	.	.	.	5	.
,, 18 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 25 .	.	.	.	.	.	.	.	.	.	.	.	.
April 1 .	.	.	?	*3601	.	.	.	.	.	.	.	.
,, 8 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 15 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 22 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 29 .	.	.	.	.	.	.	.	.	.	.	.	.
May 6 .	18	12	.	.	.	.	.	.	.	.	18	12
,, 13 .	6	5	.	.	.	.	.	.	.	.	6	5
,, 20	26	18	.	.	.	.	.	.	.	.	26	18
,, 27 .	60	63	.	.	.	.	?	†136	.	.	60	63
June 3 .	68	77	56	69	.	.	16	16½	.	.	140	162½
,, 10 .	60	46	182	353	295	1000	45	54	?	*20	582	1453
,, 17 .	57	30	197	357	295	464	65	123½	93	75	707	1049½
,, 24 .	43	39	241	714	295	550	58	33	110	143	747	1479
July 1 .	35	51	251	1018	267	1237	46	38½	120	130	719	2474½
,, 8 .	66	261	272	1792	268	1345	66	105¼	61	270	733	3773¼
,, 15 .	32	238	211	1106	261	3577½	64	235¼	89	440	657	5596¾
,, 22 .	44	99	182	1439	242	2560	60	389¾	65	382	593	4869¾
,, 29 .	27	71	130	1445	242	3320	62	178	80	788	541	5802
Aug. 5 .	23	61	20	1021	281	2437½	50	260¾	47	253½	455	4033¾
,, 12 .	13	22	4	985	238	2866½	32	157½	51	289½	534	4320½
,, 19 .	.	.	9	5	283	2538½	24	45	36	114¼	347	2702¾
,, 26 .	.	.	5	39½	227	673½	13	55	30	90¼	279	858¼
Sept. 2 .	1	1	.	16½	262	1559½	31	166½	36	248¾	335	1992¼
,, 9 .	.	.	.	.	282	1138½	17	46½	26	73	325	1258
,, 16 .	.	.	.	.	265	686½	4	4½	20	29	289	720
,, 23 .	.	.	.	.	236	511½	.	.	21	27	257	538½
.. 30 .	.	.	.	.	236	364	2	15	24	25¾	262	404¾
Oct. 7 .	.	.	2	3	214	100	.	.	22	12	238	115
,, 14 .	.	.	.	.	210	17	.	.	12	.	222	17
,, 21 .	.	.	.	.	210	152	.	.	12	8	222	160
,, 28 .	.	.	.	.	210	436	.	.	8	.	218	436

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1893.												
Nov. 4	.	.	.	.	210	1870	.	.	15	68	225	1938
,, 11	.	.	.	.	220	800	.	.	15	15	235	815
,, 18	.	.	.	.	210	897	.	.	12	30	222	927
,, 25	.	.	2	.	208	345	.	.	12	20	222	365
Dec. 2	.	.	.	.	192	504	.	.	.	.	192	504
,, 9	.	.	.	.	192	412	.	.	.	.	192	412
,, 16	.	.	.	.	169	1000	.	.	.	.	169	1000
,, 23	.	.	2	65	169	1000	.	.	.	.	171	1065
,, 30	.	.	20	112	191	2027	.	.	.	.	211	2139
1894.												
Jan. 6	.	.	.	.	.	.	.	.	.	.	.	.
,, 13	.	.	.	.	.	.	.	.	.	.	.	.
,, 20	.	.	.	.	.	.	.	.	.	.	.	.
,, 27	.	.	.	.	.	.	.	.	.	.	.	.
Feb. 3	.	.	.	.	.	.	.	.	.	.	.	.
,, 10	.	.	.	.	.	.	.	.	.	.	.	.
,, 17	3	3	.	.	.	.	.	.	.	.	3	3
,, 24	.	.	.	.	.	.	.	.	.	.	.	.
March 3	.	.	.	.	.	.	.	.	.	.	.	.
,, 10	.	.	.	.	.	.	.	.	.	.	.	.
,, 17	25	72	.	.	.	.	.	.	.	.	25	72
,, 24	15	.	.	.	.	.	.	.	.	.	15	.
,, 31	.	.	.	.	.	.	.	.	.	.	.	.
April 7	.	.	.	.	.	.	.	.	.	.	.	.
,, 14	.	.	.	.	.	.	.	.	.	.	.	.
,, 21	.	.	.	.	.	.	.	.	.	.	.	.
,, 28	.	.	.	.	.	.	.	.	.	.	.	.
May 5	.	.	.	.	.	.	.	.	.	.	.	.
,, 12	12	22½	.	.	.	.	.	.	.	.	12	22½
,, 19	20	1½	.	.	.	.	.	.	.	.	20	1½
,, 26	28	39	.	.	.	.	.	.	.	.	28	39
June 2	40	107	?	*5000	?	*555	?	8½	.	.	40	115½
,, 9	55	150	110	1516	121	66	23	11	.	.	309	1743
,, 16	75	140	117	2006	213	153	24	40½	.	.	429	2339½
,, 23	84	307	160	824½	229	1125	26	41½	?	144*	499	2298
,, 30	93	411	177	3497½	232	1705	40	103¼	105	220	647	5936¾
July 7	77	370	138	367½	243	2946	29	37½	83	231	570	3952
,, 14	76	246	138	1435	258	3842	39	84¾	47	182	558	5789¾
,, 21	68	173	138	522	258	1428	57	46	55	351	576	2520
,, 28	73	186	135	1643	245	2611	65	74	55	325	573	4839
Aug. 4	50	43	150	828	276	4136	49	34	73	164	598	5205
,, 11	45	39	165	909½	204	1442½	42	23	36	117½	528	2531½
,, 18	3	12	162	866	296	759½	29	10½	28	74½	518	1722½
,, 25	22	88	149	1200	296	1893	7	2	22	116	496	3299

* From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1894.												
Sept. 1 .	5	4	190	1100	260	1089	13	10½	12	56	480	2259½
,, 8 .	6	6	100	500	242	806	.	.	14	34	362	1346
,, 15 .	11	15	90	171½	235	607	.	.	3	11	339	804½
,, 22 .	3	17	120	800	225	486	.	.	5	24½	353	1327½
,, 29 .	2	5	100	546	200	1125	.	.	15	10½	317	1686½
Oct. 6 .	1	2	70	388½	193	527	.	.	20	30	284	947½
,, 13 .	.	.	40	106	120	40	.	.	15	29	175	175
,, 20 .	1	8	38	39½	112	424	.	.	15	10	166	481½
,, 27 .	.	.	16	9	120	50	.	.	12	5	148	64
Nov. 3 .	.	.	6	4	100	20	.	.	.	.	106	24
,, 10 .	.	.	.	.	80	43	.	.	12	8	92	51
,, 17 .	.	.	.	.	210	510	.	.	.	.	210	510
,, 24 .	.	.	.	.	209	170	.	.	12	.	221	170
Dec. 1 .	.	.	.	.	215	2357	.	.	.	.	215	2357
,, 8 .	.	.	20	.	238	1991	.	.	5	.	263	1991
,, 15 .	.	.	20	.	196	2229	.	.	.	.	216	2229
,, 22 .	.	.	12	.	158	1658	.	.	.	.	170	1658
,, 29 .	.	.	.	.	130	1573	.	.	.	.	130	1573
1895.												
Jan. 5 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 12 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 19 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 26 .	.	.	.	.	.	.	.	.	.	.	.	.
Feb. 2 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 9 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 16 .	13	240	.	.	.	.	.	.	.	.	13	240
,, 23 .	29	116	.	.	.	.	.	.	.	.	29	116
March 2 .	9	1	.	.	.	.	.	.	.	.	9	1
,, 9 .	30	169	.	.	.	.	.	.	.	.	30	169
,, 16 .	37	581	.	.	.	.	.	.	.	.	37	581
,, 23 .	42	414	.	.	.	.	.	.	.	.	42	414
,, 30 .	10	.	.	.	.	.	.	.	.	.	10	.
April 6 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 13 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 20 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 27 .	.	.	.	.	.	.	.	.	.	.	.	.
May 4 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 11 .	25	68	.	.	.	.	.	.	.	.	25	68
,, 18 .	33	38	.	.	.	.	.	.	.	.	33	38
,, 25 .	44	65	.	.	.	.	.	.	.	.	44	65
June 1 .	39	9	?	*7115½	?	*1090	.	.	?	†100	39	9
,, 8 .	53	21	126	239½	154	263	39	31¼	60	100	432	654¾
,, 15 .	73	127	152	238½	206	505	70	100¾	60	106	561	1177¼
,, 22 .	81	231	190	284	214	448	71	175½	60	158	616	1296½
,, 29 .	92	339	216	734	233	901	67	188½	94	343	702	2505½

* From 1st January. † Up to date.

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Cran	Boats	Crans	Boats	Crans	Boats	Crans
1895.												
July 6 .	85	153	239	1427½	236	1458	76	185½	102	207	738	3431
,, 13 .	63	108	267	1182	249	941	58	106½	93	213	730	2550½
,, 20 .	52	115	247	1349½	250	843	57	52	93	200	699	2559½
,, 27 .	70	156	200	555½	150	1029	37	48½	86	160	543	1949
Aug. 3 .	74	220	210	891	266	2108	61	104	80	141	691	3464
,, 10 .	48	120	186	711	270	1249½	53	85	76	140	633	2305½
,, 17 .	30	19	149	365½	270	1087	33	21½	74	119	556	1612
,, 24 .	.	.	16	35	276	359½	7	7	42	80	341	481½
,, 31 .	.	.	23	74	281	704	12	5½	35	36	351	819½
Sept. 7 .	.	.	6	10	283	955	8	12½	30	40	327	1017½
,, 14 .	.	.	5	16	299	516	1	4	30	37	335	573
,, 21 .	.	.	2	3	192	134	.	.	17	5	211	142
,, 28 .	.	.	5	11	112	69	.	.	17	7	134	87
Oct. 5 .	.	.	3	5	45	27	.	.	12	9	60	41
,, 12 .	.	.	7	48	42	36	.	.	.	.	49	84
,, 19 .	.	.	8	20	20	49	.	.	.	.	44	128
,, 26 .	.	.	8	22	14	24½	.	.	.	.	30	56½
Nov. 2 .	.	.	26	30	20	18½	.	.	.	.	51	48½
,, 9 .	.	.	11	52	157	98	.	.	.	.	173	154
,, 16 .	.	.	6	14	151	177	.	.	.	.	159	193
,, 23 .	.	.	.	.	154	1071	.	.	.	.	154	1071
,, 30 .	.	.	20	52	154	454	.	.	.	.	174	506
Dec. 7 .	.	.	.	.	150	227	.	.	.	.	150	227
,, 14 .	.	.	20	104	148	765	.	.	.	.	168	869
,, 21 .	.	.	40	32	138	213	.	.	.	.	178	245
,, 28 .	.	.	4	44	18	33	.	.	.	.	22	77
1896.												
Jan. 4 .	.	.	.	.	.	.	.	.	.	.	.	
,, 11 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 18 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 25 .	.	.	.	.	.	.	.	.	.	.	.	.
Feb. 1 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 8 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 15 .	4	185	.	.	.	.	.	.	.	.	4	185
,, 22 .	5	194	.	.	.	.	.	.	.	.	5	194
,, 29 .	.	.	.	.	.	.	.	.	.	.	.	.
March 7 .	4	.	.	.	.	.	.	.	.	.	4	.
,, 14 .	19	150	.	.	.	.	.	.	.	.	19	150
,, 21 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 28 .	.	.	.	.	.	.	.	.	.	.	.	.
April 4 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 11 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 18 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 25 .	.	.	.	.	.	.	.	.	.	.	.	.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1896.												
May 2 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 9 .	9	6	.	.	.	.	.	.	.	.	9	6
,, 16 .	7	3	.	.	.	.	.	.	.	.	7	3
,, 23 .	36	32	.	.	.	.	.	.	.	.	36	32
,, 30 .	40	45	?	*2914	?	*2012	.	.	.	.	40	45
June 6 .	40	92	126	277	121	219	22	26½	.	.	309	614½
,, 13 .	66	158	136	294	189	236	35	27½	.	.	426	715½
,, 20 .	71	99	194	590	214	321	38	36	?	322†	517	1046
,, 27 .	79	194	1941	016	214	668	35	56¼	75	120	597	2054¼
July 4 .	68	300	1571	193	2211	020	40	156¾	49	234	535	2903¾
,, 11 .	67	110	197	739	217	905	41	126	88	354	610	2234
,, 18 .	46	51	240	552	222	770	37	57	61	122	606	1552
,, 25 .	23	14	212	471	232	753	30	40	42	119	539	1397
Aug. 1 .	24	7	203	425	284	426	16	18	36	108	563	984
,, 8 .	14	51	140	710	2761	505	19	83	39	317	488	2666
,, 15 .	17	28	154	415	261	491	14	31	31	88	477	1053
,, 22 .	4	15	149	305	2101	166	8	3	31	97	402	1586
,, 29 .	5	10	193	674	210	429	6	1	18	46	432	1160
Sept. 5 .	5	12	163	218	2781	090	.	.	23	127	469	1447
,, 12 .	1	2	143	276	238	684	.	.	16	60	398	1022
,, 19 .	.	.	73	125	98	294	.	.	4	22	175	441
,, 26 .	9	22	56	490	161	246	.	.	16	27	242	785
Oct. 3 .	16	105	731	867	193	899	.	.	20	115	302	2986
,, 10 .	14	26	61	200	178	654	.	.	10	40	263	920
,, 17 .	14	16	49	61	169	381	.	.	15	38	247	496
,, 24 .	10	10	.	.	102	55	.	.	12	.	124	65
,, 31 .	6	4	48	329	157	416	.	.	24	60	235	809
Nov. 7 .	.	.	45	53	1641	515	.	.	18	30	227	1598
,, 14 .	.	.	40	72	158	117	.	.	.	.	198	189
,, 21 .	.	.	.	.	168	427	.	.	.	.	168	427
,, 28 .	.	.	14	335	134	383	.	.	.	.	148	718
Dec. 5 .	.	.	10	26	134	128	.	.	.	.	144	154
,, 12 .	.	.	2	1	134	100	.	.	.	.	136	101
,, 19 .	.	.	10	147	122	96	.	.	.	.	132	243
,, 26 .	.	.	26	198	37	.	.	.	.	.	63	198
1897.												
Jan. 2 .	.	.	.	.	-	.	.	.	.	.	.	.
,, 9 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 16 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 23 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 30 .	.	.	.	.	.	.	.	.	.	.	.	.
Feb. 6 .	.	.	.	.	-	.	.	.	.	.	.	.
,, 13 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 20 .	9	28	.	.	.	.	.	.	.	.	9	28
,, 27 .	12	18	.	.	.	.	.	.	.	.	12	18

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1897.													
March	6	14	17	.	.	.	.	.	.	.	.	14	17
,,	13	19	260	.	.	.	.	.	.	.	.	19	260
,,	20	18	146	.	.	.	.	.	.	.	.	18	146
,,	27	.	.	.	.	.	.	.	.	.	.	.	.
April	3	.	.	.	.	.	.	.	.	.	.	.	.
,,	10	.	.	.	.	.	.	.	.	.	.	.	.
,,	17	.	.	.	.	.	.	.	.	.	.	.	.
,,	24	.	.	.	.	.	.	.	.	.	.	.	.
May	1	.	.	.	.	.	.	.	.	.	.	.	.
,,	8	.	.	.	.	.	.	.	.	.	.	.	.
,,	15	.	.	.	.	.	.	.	.	.	.	.	.
,	22	.	.	.	.	.	.	.	.	.	.	.	.
,,	29	.	.	?	393*	?	849*	.	.	.	.	.	.
June	5	17	7	32	124	139	248	?	†22	.	.	188	379
,,	12	20	9	72	22	160	801	13	4¼	.	.	265	836¼
,,	19	22	7	102	86	179	154	30	¾	?†	109	333	247¾
,,	26	15	10	178	556	189	553	24	3	50	68	456	1190
July	3	37	124	205	2076	203	719	30	11¾	39	113	514	3043¾
,,	10	50	197	220	1598	199	779	33	62	43	103	545	2739
,,	17	69	226	220	1774	204	1307	35	70	64	272	592	3649
,,	24	58	224	221	2607	212	849	49	92	64	232	604	4004
,,	31	62	108	187	1637	226	2222	28	93¼	54	199	557	4259¼
Aug.	7	43	68	206	1044	233	2342	43	144	52	222	577	3820
,,	14	13	5	127	862	298	3204	32	50	42	184	512	4305
,,	21	13	20	97	303	307	3035	25	26	42	240	484	3624
,,	28	10	17	34	1412	309	2216	21	21	32	103	406	3769
Sept.	4	12	35	137	1139	309	4099	10	13	35	162	503	5448
,,	11	12	69	136	1604	309	5831	2	4	33	391	492	7899
,,	18	12	64	90	268	309	4046	5	23	23	175	439	4576
,,	25	14	41	98	973	298	3622	6	48	45	320	461	5004
Oct.	2	.	.	97	1017	288	2302	.	.	40	60	425	3379
,,	9	13	26	86	1745	245	2487	.	.	33	83	377	4341
,,	16	13	8	50	664	184	320	.	.	20	51	267	1043
,,	23	14	11	78	1135	184	1388	.	.	25	59	301	2593
,,	30	11	3	18	162	221	2121	.	.	26	58	276	2344
Nov.	6	.	.	10	164	241	1115	.	.	16	37	267	1316
,,	13	.	.	8	79	243	886	.	.	6	5	257	970
,,	20	.	.	64	366	270	813	.	.	13	110	347	1289
,,	27	.	.	54	328	270	2949	.	.	15	170	339	3447
Dec.	4	.	.	16	2	270	2045	.	.	6	12	292	2059
,,	11	.	.	.	.	6	70	.	.	.	.	6	70
,,	18	.	.	8	56	217	1728	.	.	.	.	225	1784
,,	25	.	.	16	6	227	1320	.	.	.	.	243	1326
,,	31	.	.	.	.	107	400	.	.	.	.	107	400

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1898. Spring Fishing	?	30	?	816*	?	*736	.	.	.	.	.	.
June 4 .	42	111	100	578	123	95	.	.	.	.	265	784
,, 11 .	41	126	169	968	181	550	?	*44	?	†34	391	1644
,, 18 .	48	86	186	1044	184	854	24	7	34	133	476	2124
,, 25 .	58	240	186	1799	192	971	24	5	35	88½	495	3103½
July 2 .	51	302	172	2032	196	1782	24	11	36	112½	479	4239½
,, 9 .	44	181	172	2163	296	2047	12	24	25	85	449	4500
,, 16 .	55	82	173	738	204	1976	14	72	47	288	493	3156
,, 23 .	53	24	199	1471	240	3960	14	4	48	113	554	5572
,, 30 .	50	37	162	565	235	3653	22	44	42	172	511	4471
Aug. 6 .	20	9	125	271	298	1880	8	9	42	146	493	2315
,, 13 .	?	47	110	5	307	2374	19	32	37	107	473	2565
,, 20 .	?	31	90	639	400	2001	13	21	43	103	546	2795
,, 27 .	?	3	86	865	350	2640	7	13	40	122	483	3643
Sept. 3 .	?	1	98	490	310	754	7	1	26	32	441	1278
,, 10 .	?	6	306	959	156	1296	3	4	31	108	496	2373
,, 17 .	.	.	309	229	188	1697	.	.	25	50	522	1976
,, 24 .	.	.	116	927	210	1414	.	.	16	38	342	2379
Oct. 1 .	.	.	80	166	233	539	1	4	24	75	338	784
,, 8 .	.	.	40	162	212	1487	.	.	17	28	269	1677
,, 15 .	.	.	57	108	235	1212	.	.	15	31	307	1351
,, 22 .	.	.	35	89	254	301	.	.	15	34	304	424
,, 29 .	.	.	30	28	240	481	.	.	12	6	282	515
Nov. 5 .	.	.	10	4	233	659	.	.	23	24	266	687
,, 12 .	.	.	50	556	220	883	.	.	20	150	290	1589
,, 19 .	.	.	150	458	120	510	.	.	21	48	291	1016
,, 26 .	.	.	154	1098	179	1725	.	.	.	.	333	2823
Dec. 3 .	.	.	120	1262	91	1383	.	.	.	.	211	2645
,, 10 .	.	.	80	576	91	843	.	.	.	.	171	1419
,, 17 .	.	.	90	1342	129	.	.	.	.	.	219	1342
,, 24 .	.	.	96	1131	92	98	.	.	.	.	188	1229
,, 31 .	.	.	36	278	.	.	.	.	.	.	36	278
1899. "Winter."	?	1247	.	.	.	.	?	200	.	.	?	1447
1st to 6th May.	?	15	.	.	.	.	.	.	.	.	?	15
May 13 .	?	38	.	.	.	.	.	.	.	.	?	38
,, 20 .	23	58	.	.	.	.	.	.	.	.	23	58
,, 27 .	35	34	.	*4120	.	.	.	.	.	.	35	34
June 3 .	39	66	72	209	.	.	.	.	.	.	111	275
,, 10 .	41	77	94	1066	165	678	.	.	.	.	300	1821
,, 17 .	51	117	126	1212	170	526	16	4	?	273*	363	1859
,, 24 .	56	69	150	582	179	423	20	5	39	57	444	1136
July 1 .	56	71	166	1190	188	1386	18	8½	39	62	467	2717½
,, 8 .	48	71	160	1254	190	1832	14	11	39	105	451	3273
,, 15 .	36	70	126	1988	190	2304	10	14	20	119	382	4495
,, 22 .	16	12½	176	1493	197	2666	3	7	24	120	416	4298
,, 29 .	30	71	176	1314	200	1750	12	6	27	67	445	3208½

* From 1st January. † Up to date.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1899.													
Aug.	5 .	33	68	1782	703	200	2360	21	35½	24	189	456	5355½
,,	12 .	24	154	1781	381	200	3320	22	78	27	164	451	5097
,,	19 .	56	109	1781	601	260	1795	29	89	34	160	557	3754
,,	26 .	12	6½	72	90	260	934	25	39	19	132	388	1201½
Sept.	2 .	32	11	197	1164	110	1164	9	7½	25	175	373	2521½
,,	9 .	10	3	198	902	110	579	13	6½	21	145	352	1635½
,,	16 .	11	8	255	3767	92	529	7	2½	25	184	390	4490½
,,	23 .	13	50	137	855	13	329	13	59	15	33	191	1326
,,	30 .	13	59	125	611	190	1462	5	2	20	68	353	2202
Oct.	7 .	16	87	94	112	97	740	3	1	15	77	225	1017
,,	14 .	17	24	105	1376	160	132	.	.	13	111	295	1643
,,	21 .	18	17	.	.	193	360	.	.	25	287	236	664
,,	28 .	16	10	.	.	193	459	.	.	30	553	239	1022
Nov.	4 .	14	82	.	.	230	1079	.	.	25	8	269	1169
,,	11 .	15	62	.	.	230	445	.	.	16	26	261	533
,,	18 .	15	20	60	218	230	437	.	.	24	242	329	917
,,	25 .	4	1	78	1957	230	1346	.	.	20	182	332	3486
Dec.	2 .	.	.	70	542	230	491	.	.	.	.	300	1033
,,	9 .	.	.	.	.	220	644	.	.	.	.	220	644
,,	16 .	.	.	.	.	200	1809	.	.	.	.	200	1809
,,	23 .	.	.	50	13	120	134	.	.	.	.	170	147
,,	30 .	.	.	50	178	.	.	.	.	.	.	50	178
,,	1-31 .	?	190	.	.	.	.	.	.	.	.	?	190
1900.													
"Winter."		.	.	.	.	.	.	?	9	.	.	?	9
Feb.	17 .	20	93	.	.	.	.	.	.	.	,	20	93
,,	24 .	57	356	.	.	.	.	.	.	.	.	57	356
March	3 .	64	752	.	.	.	.	.	.	.	.	64	752
,,	10 .	68	2912	.	.	.	.	.	.	.	.	68	2912
May	26 .	7	18	?	*3994	?	*13	.	.	.	.	7	18
June	2 .	41	88	120	373	160	124	.	.	.	.	321	585
,,	9 .	37	96	158	979	170	604	.	.	.	.	365	1679
,,	16 .	40	201	130	401	175	417	18	26	?	104*	363	1045
,,	23 .	53	144	140	1360	180	967	19	28	23	38	415	2537
,,	30 .	55	126	158	1184	190	1635	23	24	24	68	450	3037
July	7 .	41	74	158	1737	190	1239	18	3¾	30	85	437	3138¾
,,	14 .	33	65	140	1371	188	1457	5	6	22	58	388	2957
,,	21 .	22	70	130	2057	196	3633	8	19	20	106	376	5885
,,	28 .	38	71	128	1797	210	1194	4	3	33	66	413	3131
Aug.	4 .	28	43	130	1892	210	411	5	15	17	71	390	2432
,,	11 .	25	186	200	3981	150	357	8	6	26	97	409	4627
,,	18 .	20	68	200	1815	180	1635	8	6	22	99	430	3623
,,	25 .	8	11	104	1764	220	2480	.	.	22	101	354	4356

* From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1900.												
Sept. 1 .	6	8	160	1903	180	440	.	.	19	107	365	2458
,, 8 .	6	2	200	1806	150	1187	4	22	24	130	384	3147
,, 15 .	11	34	190	2502	140	511	3	7	24	123	368	3177
,, 22 .	.	.	190	1956	190	673	2	3	23	56	405	2688
,, 29 .	.	.	190	2632	140	1127	.	.	30	400	360	4159
Oct. 6 .	11	31	170	2574	160	475	.	.	18	63	359	3143
,, 13 .	6	3	120	70	130	232	2	$4\frac{1}{4}$	.	.	258	$309\frac{1}{4}$
,, 20 .	13	9	180	890	150	762	.	.	8	18	351	1679
,, 27 .	.	.	140	567	170	67	.	.	.	.	310	634
Nov. 3 .	.	.	104	27	170	916	.	.	.	.	274	943
,, 10 .	.	.	100	64	200	24	.	.	.	.	300	88
,, 17 .	.	.	90	405	190	156	.	.	.	.	280	561
,, 24 .	.	.	90	114	180	525	.	.	.	.	270	639
Dec. 1 .	13	11	90	.	170	50	.	.	.	.	273	61
,, 8 .	.	.	84	342	200	1399	.	.	.	.	284	1741
,, 15 .	.	.	.	.	150	.	.	.	.	.	150	.
,, 22 .	.	.	.	.	120	33	.	.	.	.	120	33
,, 29 .	.	.	.	.	.	.	.	.	.	.	.	.
1901.												
"Winter" .	.	.	.	.	.	.	?	$12\frac{1}{2}$	.	.	?	$12\frac{1}{2}$
Feb. 9 .	32	100	.	.	.	.	.	.	.	.	32	100
,, 16 .	70	1641	.	.	.	.	.	.	.	.	70	1641
,, 23 .	116	2107	.	.	.	.	.	.	.	.	116	2107
March 2 .	118	1804	.	.	.	.	.	.	.	.	118	1804
,, 9 .	49	159	.	.	.	.	.	.	.	.	49	159
,, 16 .	66	3205	.	.	.	.	.	.	.	.	66	3205
,, 23 .	31	379	.	.	.	.	.	.	.	.	31	379
,, 30 .	.	.	.	.	.	.	.	.	.	.	.	.
May 11 .	9	20	.	.	.	.	.	.	.	.	9	20
,, 18 .	18	27	.	.	?	*100	.	.	.	.	18	27
,, 25 .	19	41	.	.	140	38	.	.	.	.	159	79
June 1 .	25	22	?	*6097	150	184	.	.	.	.	175	206
,, 8 .	35	312	150	982	175	462	.	.	.	.	360	1756
,, 15 .	31	32	170	595	175	195	10	3	.	.	396	825
,, 22 .	44	36	175	1237	175	311	18	$7\frac{1}{2}$	?	281*	412	$1591\frac{1}{2}$
,, 29 .	40	117	180	907	185	1968	18	$4\frac{1}{2}$	11	57	434	$3053\frac{1}{2}$
July 6 .	54	127	160	1243	200	1987	18	26	22	115	454	3498
,, 13 .	39	69	160	705	200	1279	7	12	16	109	422	2174
,, 20 .	18	53	150	1709	200	1038	10	11	34	141	412	2952
,, 27 .	14	14	130	2604	200	1664	13	78	22	141	379	4501
Aug. 3 .	30	18	140	867	200	1400	11	16	27	102	391	2403
,, 10 .	20	36	200	1333	190	2087	11	9	23	128	444	3593
,, 17 .	25	63	150	1959	180	1459	14	15	22	121	391	3617
,, 24 .	4	4	210	3162	200	2623	14	25	25	225	453	6039
,, 31 .	.	.	80	327	240	921	4	9	10	50	334	1307

* From 1st January.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1901.													
Sept.	7	8	6	90	1032	240	2306	3	7	18	149	359	3500
,,	14	10	15	140	563	240	3541	4	10	16	91	410	4220
,,	21	8	10	100	669	210	729	.	.	16	13	334	1421
,,	28	8	12	170	977	180	601	3	3	16	27	377	1620
Oct.	5	.	.	130	864	170	665	3	2	10	38	313	1569
,,	12	.	.	150	17	150	369	.	.	4	7	304	393
,,	19	.	.	100	13	130	141	.	.	.	.	230	154
,,	26	.	.	90	.	120	50	.	.	.	.	210	50
Nov.	2	.	.	.	.	120	140	.	.	.	.	120	140
,,	9	.	.	.	.	130	34	.	.	.	.	130	34
,,	16	.	.	50	55	90	345	.	.	.	.	140	400
,,	23	.	.	50	107	140	275	.	.	.	.	190	382
,,	30	.	.	98	919	180	89	.	.	.	.	278	1008
Dec.	7	.	.	110	1396	150	94	.	.	.	.	260	1490
,,	14	.	.	115	326	150	15	.	.	.	.	265	341
,,	21	.	.	90	124	150	1649	.	.	.	.	240	1773
,,	28	.	.	70	560	120	358	.	.	.	.	190	918
1902.													
Winter		.	.	?	3881	.	.	.	.	.	.	?	3881
Jan.	11	10	14	.	.	.	.	.	.	.	.	10	14
,,	18	46	591	.	.	.	.	.	.	.	.	46	591
,,	25	92	1064	.	.	.	.	.	.	.	.	92	1064
Feb.	1	100	781	.	.	.	.	.	.	.	.	100	781
,,	8	105	389	.	.	.	.	.	.	.	.	105	389
,,	15	97	831	.	.	.	.	.	.	.	.	97	831
,,	22	97	549	.	.	.	.	.	.	.	.	97	549
March	1	108	1303	.	.	.	.	.	.	.	.	108	1303
,,	8	108	1302	.	.	.	.	.	.	.	.	108	1302
,,	15	90	14	.	.	.	.	.	.	.	.	90	14
,,	22	.	.	.	.	.	.	.	.	.	.	.	.
,,	29	.	.	.	.	.	.	.	.	.	.	.	.
May	3	.	.	.	.	.	.	.	.	.	.	.	.
,,	10	8	28	.	.	.	.	.	.	.	.	8	28
,,	17	9	18	.	.	.	.	.	.	.	.	9	18
,,	24	16	18	.	.	.	.	.	.	.	.	16	18
,,	31	30	81	.	.	.	.	.	.	.	.	30	81
June	7	36	131	210	991	150	124	.	.	.	.	396	1246
,,	14	36	130	150	1692	160	154	.	.	.	.	346	1976
,,	21	10	4	170	1384	170	210	.	.	.	.	350	1598
,,	28	25	60	180	828	180	363	.	.	18	58	403	1309
July	5	35	152	180	2513	190	1212	.	.	19	104	424	3981
,,	12	30	62	180	1939	190	350	6	31	14	71	420	2453
,,	19	32	77	170	2576	205	1737	10	7	16	92	433	4489
,,	26	34	83	140	2387	220	798	15	18	29	149	438	3435

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1902.													
Aug.	2 .	49	92	190	2565	200	2276	14	42	32	208	485	5183
,,	9 .	27	32	210	2933	190	1163	14	23	42	184	483	4335
,,	16 .	26	42	210	3494	180	2033	12	23	34	157	462	5749
,,	23 .	6	12	220	2023	190	763	15	24	25	67	456	2889
,,	30 .	18	20	220	3277	190	1693	8	17	35	152	471	5159
Sept.	6 .	.	.	210	1743	200	1382	6	11	14	57	430	3193
,,	13 .	.	.	190	2258	220	1697	.	.	24	120	434	4075
,,	20 .	.	.	60	70	220	720	3	1	8	24	291	815
,,	27 .	.	.	100	.	220	402	.	.	8	23	328	425
Oct.	4 .	.	.	90	.	210	820	.	.	11	55	311	875
,,	11 .	.	.	20	203	110	1196	120	113	90	500	340	2012
,,	18 .	.	.	.	.	110	204	140	1064	90	870	340	2138
,,	25 .	.	.	40	8	170	858	10	204	90	500	310	1570
Nov.	1 .	.	.	30	106	120	981	.	.	68	780	218	1867
,,	8 .	.	.	10	25	140	1109	.	.	87	2808	237	3942
,,	15 .	.	.	.	.	120	517	.	.	148	718	268	1235
,,	22 .	.	.	2	5	160	493	.	.	142	3599	304	4097
,,	29 .	.	.	.	.	160	394	.	.	216	5219	376	5613
Dec.	6 .	.	.	2	1	160	234	.	.	195	3467	357	3702
,,	13 .	.	.	2	3	150	283	.	.	226	2883	378	3169
,,	20 .	.	.	.	.	150	1304	.	.	104	1727	254	3031
,,	27 .	.	.	60	287	140	408	.	.	112	1070	312	1765
,,	27-31 .	.	.	70	824	120	461	.	.	.	.	190	1285
1903.													
"Winter"	.	.	.	?	4430	?	12		28	.	.	?	4470
Jan.	3 .	.	.	.	.	.	.	.	.	55	961	55	961
,,	10 .	20	130	.	.	.	.	.	.	157	1938	177	2068
,,	17 .	38	83	.	.	.	.	.	.	112	2630	150	2713
,,	24 .	39	271	.	.	.	.	.	.	62	412	101	683
,,	31 .	20	46	.	.	.	.	.	.	56	1190	76	1236
Feb.	7 .	28	45	.	.	.	.	.	.	40	144	68	189
,,	14 .	28	94	.	.	.	.	.	.	.	.	28	94
,,	21 .	40	26	.	.	.	.	.	.	.	.	40	26
,,	28 .	5	12	.	.	.	.	.	.	.	.	5	12
March	7 .	8	17	.	.	.	.	.	.	.	.	8	17
,,	14 .	30	8	.	.	.	.	.	.	.	.	30	8
,,	21 .	.	.	.	.	.	.	.	.	.	.	.	.
,,	28 .	.	.	.	.	.	.	.	.	.	.	.	.
May	9 .	2	3	.	.	.	.	.	.	.	.	2	3
,,	16 .	7	6	.	.	.	.	.	.	.	.	7	6
,,	23 .	18	60	.	.	.	.	.	.	.	.	18	60
,,	30 .	25	27	.	.	.	.	.	.	.	.	25	27
June	6 .	17	30	200	623	150	63	.	.	.	.	367	716
,,	13 .	23	49	170	575	150	266	.	.	.	.	343	890
,,	20 .	37	71	180	946	180	244	.	.	.	.	397	1261
,,	27 .	38	190	150	1036	190	292	.	.	9	21	387	1539

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1903.													
July	4	36	299	150	962	190	785	2	7	14	54	392	2107
,,	11	40	288	146	2043	185	2347	6	70	16	59	393	4807
,,	18	40	242	150	1573	195	2375	9	32	22	61	416	4283
,,	25	38	94	155	2302	186	1946	14	87	28	132	421	4561
Aug.	1	29	39	160	2208	195	1850	14	60	27	107	425	4264
,,	8	.	.	170	1815	190	1053	13	25	20	114	393	3007
,,	15	2	2	180	2957	190	407	11	12	16	118	399	3496
,,	22	1	7	185	2844	185	682	.	.	17	71	388	3604
,,	29	3	5	195	2181	180	335	3	1	19	48	400	2570
Sept.	5	31	27	190	608	185	1458	.	.	39	286	445	2379
,,	12	12	6	96	86	250	1153	3	2	99	630	460	1877
,,	19	1	4	75	.	240	2221	.	.	102	1482	418	3707
,,	26	.	.	50	.	240	1679	4	8	160	929	454	2616
Oct.	3	21	20	6	.	240	609	.	.	5	35	272	664
,,	10	.	.	20	.	150	123	.	.	.	.	170	123
,,	17	.	.	10	.	130	515	.	.	64	648	204	1163
,,	24	.	.	6	.	170	30	.	.	321	1649	497	1679
,,	31	.	.	4	.	140	.	.	.	52	612	196	612
Nov.	7	.	.	10	.	150	48	.	.	144	965	304	1013
,,	14	.	.	12	.	130	.	.	.	126	312	268	312
,,	21	.	.	10	.	90	.	.	.	130	767	230	767
,,	28	.	.	60	272	150	63	.	.	113	673	323	1008
Dec.	5	.	.	80	902	140	.	.	.	95	880	315	1782
,,	12	.	.	84	142	140	22	.	.	134	2607	358	2771
,,	19	.	.	80	261	150	4	.	.	160	3456	390	3721
,,	26	.	.	86	864	160	616	.	.	108	3311	354	4791
,,	26–31	.	.	24	132	160	.	.	.	61	643	245	775
1904.													
Winter		.	.	?	5872	?	16	?	18	?	2843	?	8749
Jan.	2	.	.	.	.	.	.	.	.	.	.	.	.
,,	9	.	.	.	.	.	.	.	.	.	.	.	.
,,	16	?	5	.	.	.	.	.	.	.	.	?	5
,,	23	21	24	.	.	.	.	.	.	.	.	21	24
,,	30	25	63	.	.	.	.	.	.	.	.	25	63
Feb.	6	24	67	.	.	.	.	.	.	.	.	24	67
,,	13	30	43	.	.	.	.	.	.	.	.	30	43
,,	20	49	307	.	.	.	.	.	.	.	.	49	307
,,	27	33	44	.	.	.	.	.	.	.	.	33	44
March	5	23	23	.	.	.	.	.	.	.	.	23	23
,,	12	17	105	.	.	.	.	.	.	.	.	17	105
,,	19	23	194	.	.	.	.	.	.	.	.	23	194
,,	26	.	.	.	.	.	.	.	.	.	.	.	.
April	2	.	.	.	.	.	.	.	.	.	.	.	.
,,	9	.	.	.	.	.	.	.	.	.	.	.	.
,,	16	.	.	.	.	.	.	.	.	.	.	.	.
,,	23	.	.	.	.	.	.	.	.	.	.	.	.
,,	30	.	.	.	.	?	*53	.	.	.	.	.	.

* Up to April 30th.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended		Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
		Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1904.													
May	7	.	.	.	.	65	17	.	.	.	.	65	17
,,	14	.	.	.	.	70	8	.	.	.	.	70	8
,,	21	.	.	.	.	90	63	.	.	.	.	90	63
,,	28	.	.	.	.	120	164	.	.	.	.	120	164
June	4	13	8	120	564	160	156	.	.	.	.	293	728
,,	11	21	46	123	271	180	247	.	.	.	.	324	564
,,	18	27	38	104	143	190	381	.	.	.	.	321	562
,,	25	30	17	104	402	200	644	.	.	.	.	334	1063
July	2	30	13	114	170	200	380	.	.	7	38	344	601
,,	9	35	38	140	363	200	406	2	2	16	46	393	855
,,	16	35	48	140	190	200	789	9	9	17	48	401	1084
,,	23	41	41	140	982	200	1075	13	16	18	53	412	2167
,,	30	32	111	130	403	180	742	18	31	22	57	382	1344
Aug.	6	28	15	140	619	190	402	14	8	39	249	411	1293
,,	13	17	21	170	531	185	604	15	14	20	58	407	1228
,,	20	9	27	180	350	175	465	11	5	12	30	387	877
,,	27	16	15	190	272	170	413	8	2	9	29	393	731
Sept.	3	14	16	180	246	160	205	8	4	94	850	456	1321
,,	10	.	.	170	139	150	4	8	.	99	316	427	459
,,	17	4	4	160	379	130	45	3	1	5	1	302	430
,,	24	5	7	120	26	80	269	4	3	141	709	350	1014
Oct.	1	.	.	70	79	190	42	6	8	170	698	436	827
,,	8	.	.	50	45	150	.	.	.	172	225	372	270
,,	15	.	.	50	103	130	.	.	.	.	.	180	103
,,	22	.	.	60	46	130	1	.	.	20	6	210	53
,,	29	.	.	10	24	90	12	.	.	6	7	106	43
Nov.	5	.	.	10	.	.	.	.	.	4	3	14	3
,,	12	.	.	6	.	60	.	.	.	9	12	75	12
,,	19	.	.	6	.	110	.	.	.	25	23	141	23
,,	26	.	.	2	2	50	.	.	.	8	10	60	12
Dec.	3	.	.	2	2	160	12	.	.	171	484	333	498
,,	10	.	.	8	.	130	46	.	.	82	12	220	58
,,	17	.	.	10	.	140	.	.	.	24	60	174	60
,,	24	.	.	80	377	160	150	.	.	90	267	330	794
,,	31	.	.	80	306	160	16	.	.	32	139	272	461
1905.													
Winter		?	48	?	*5384	?	†558	?	79	?	206	?	843
May	6	.	.	.	.	60	134	.	.	.	.	60	134
,,	13	.	.	.	.	110	360	.	.	.	.	110	360
,,	20	.	.	.	.	120	398	.	.	.	.	120	398
,,	27		58‡	.	.	130	78	.	.	.	.	130	78
June	3	26	143	100	258	130	8	.	.	.	.	256	409
,,	10	24	51	130	1044	100	114	.	.	.	.	254	1209
,,	17	17	12	110	535	140	10	.	.	.	.	267	557
,,	24	32	77	116	709	160	192	.	.	?	204§	308	978

* Up to 31st May. † To 29th April. ‡ Up to date.
§ Up to 24th June.

TABLE XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued.*

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1905.												
July 1 .	47	77	118	340	170	188	.	.	10	40	345	645
,, 8 .	26	128	170	1246	160	90	7	5	10	36	373	1505
,, 15 .	32	113	160	1396	165	188	6	6	16	128	379	1831
,, 22 .	31	77	180	2057	140	90	3	4	16	67	370	2295
,, 29 .	31	61	220	3038	100	72	8	23	17	62	376	3256
Aug. 5 .	29	66	260	1771	40	35	4	2	23	79	356	1953
,, 12 .	32	117	300	1717	50	48	10	9	17	33	409	1894
,, 19 .	24	112	250	1223	100	96	6	15	113	32	493	1478
,, 26 .	32	94	200	348	120	108	8	22	5	26	365	598
Sept. 2 .	39	242	20	116	80	40	10	269	2	11	151	678
,, 9 .	15	87	10	5	90	31	9	418	3	222	127	763
,, 16 .	9	11	.	.	80	7	10	337	4	147	103	502
,, 23 .	13	20	12	1	60	164	10	36	.	.	95	221
,, 30 .	9	4	15	.	70	8	128	742	?	22	222	776
Oct. 7 .	.	.	20	.	80	124	50	34	.	.	150	158
,, 14 .	.	.	20	.	100	153	30	121	5	62	155	336
,, 21 .	.	.	40	2	120	30	66	1298	20	88	246	1418
,, 28 .	.	.	20	30	80	21	90	518	6	88	196	657
Nov. 4 .	.	.	20	.	80	21	90	219	1	3	191	243
,, 11 .	.	.	10	.	80	100	20	2	.	.	110	102
,, 18 .	.	.	8	40	90	4	.	.	.	.	98	44
,, 25 .	.	.	30	64	70	36	.	.	6	45	106	145
Dec. 2 .	.	.	30	34	80	258	.	.	9	25	119	317
,, 9 .	.	.	8	17	110	.	.	.	.	.	118	17
,, 16 .	.	.	30	67	100	866	.	.	5	30	135	963
,, 23 .	.	.	20	16	90	42	.	.	8	15	118	73
,, 30 .	.	.	.	.	60	.	.	.	.	.	60	.
1906.												
Winter .	.	.	.	.	?	14	?	687	?	57	?	758
Feb. 3 .	34	147	.	.	.	.	.	.	.	.	34	147
,, 10 .	14	14	.	.	.	.	.	.	.	.	14	14
,, 17 .	22	9	.	.	.	.	.	.	.	.	22	9
,, 24 .	10	13	.	.	.	.	.	.	.	.	10	13
March 3 .	12	98	.	.	.	.	.	.	.	.	12	98
,, 10 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 17 .	9	44	.	.	.	.	.	.	.	.	9	44
,, 24 .	24	247	.	.	.	.	.	.	.	.	24	247
,, 31 .	.	.	.	.	.	.	.	.	.	.	.	.
April 7 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 14 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 21 .	.	.	.	.	.	.	.	.	.	.	.	.
,, 28 .	.	.	.	.	?	*220	.	.	.	.	.	.
May 5 .	.	.	.	.	40	44	.	.	.	.	40	44
,, 12 .	.	.	.	.	70	86	.	.	.	.	70	86
,, 19 .	.	.	.	.	100	74	.	.	.	.	100	74
,, 26 .	.	.	.	.	120	188	.	.	.	.	120	188

* Up to 28th April.

Table XXII., showing the Weekly Catch of Herrings in the Firth of Clyde Districts from 1854-1906—*continued*.

Week ended	Ballantrae.		Campbeltown.		Inveraray.		Greenock.		Rothesay.		Total.	
	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans	Boats	Crans
1906.												
June 2 .	?	*75	?	‡3552	120	130	.	.	?	106§	120	130
,, 9 .	23	50	100	472	80	224	.	.	.	.	203	746
,, 16 .	39	109	1201	261	120	252	.	.	6	32	285	1654
,, 23 .	31	15	1301	139	120	42	.	.	6	50	287	1246
,, 30 .	40	91	136	520	120	188	.	.	10	51	306	850
July 7 .	34	158	134	700	130	359	6	25	10	101	314	1343
,, 14 .	47	251	150	673	130	332	12	75	19	89	358	1420
,, 21 .	19	17	160	659	120	33	7	8	28	153	334	870
,, 28 .	36	127	1801	454	120	298	11	33	20	73	367	1985
Aug. 4 .	33	156	220	175	110	83	12	79	27	55	402	548
,, 11 .	36	108	220	207	90	179	13	109	34	184	393	787
,, 18 .	19	109	80	50	60	16	19	254	101	567	279	996
,, 25 .	27	21	30	12	40	5	18	414	200	435	315	887
Sept. 1 .	27	237	20	97	20	3	18	448	1981	513	283	2298
,, 8 .	6	12	.	.	10	1	12	192	204	948	232	1153
,, 15 .	25	197	.	.	20	47	13	206	169	547	227	997
,, 22 .	26	34	8	1	50	284	17	519	2282	247	329	3085
,, 29 .	11	17	20	78	80	367	20	713	2362	328	367	3503
Oct. 6 .	.	.	10	5	140	1230	11	258	241	686	402	2179
,, 13 .	.	.	.	.	150	252	8	20	2623	218	420	3490
,, 20 .	.	.	.	.	150	2	.	.	250	.	400	2
,, 27 .	.	.	.	.	2	.	3	173	250	.	255	173
Nov. 3 .	21	69	.	.	10	.	4	38	7	16	42	123
,, 10 .	29	454	.	.	30	255	9	65	5	22	73	796
,, 17 .	42	266	.	.	8	.	56	417	5	25	111	708
,, 24 .	40	612	.	.	8	.	58	641	.	.	106	1253
Dec. 1 .	521	163	.	.	4	.	164	853	2	9	222	2025
,, 8 .	681	768	.	.	8	.	139	377	5	15	220	2160
,, 15 .	1251	499	4	5	.	.	52	575	6	36	187	2115
,, 22 .	1244	911	.	.	.	.	39	168	12	62	175	5141
,, 29 .	702	017	.	.	4	50	58	518	18	84	150	2669

* For April and May. ‡ From 1st January. § Up to 2nd June.

Table XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906.

Week ended	Boats.	Crans.
1854.		
July 1	400	800
,, 8	450	700
,, 15	460	1000
,, 22	465	1000
,, 29	400	1500
Aug. 5	500	700
,, 12	550	800
,, 19	540	1500
,, 26	540	2000
Sept. 2	540	1200
,, 9	330	800
,, 16	...	...
,, 23	...	...
,, 30	...	...
Oct. 7	...	...
,, 14	...	...
,, 21	...	...
,, 28	300	2400
Nov. 4	...	...
,, 11	150	500
,, 18	...	...
,, 25	140	1100
Dec. 2	80	600
1855.		
June 23	340	830
,, 30	390	1473
July 7	425	2065
,, 14	380	1674
,, 21	380	1275
,, 28	425	707
Aug. 4	480	1650
,, 11	500	2000
,, 18	500	3000
,, 25	520	1800
Sept. 1	520	2200
,, 8	520	1000
,, 15	400	200
,, 22	300	200
,, 29	400	600
Oct. 6	300	500
,, 13	300	600
,, 20	300	2500
,, 27	260	380
Nov. 3	280	500
,, 10	320	1544
,, 17	300	1700
,, 24	220	150
1855.		
Dec. 1	230	430
,, 8	200	250
,, 15	180	295
,, 22	...	...
,, 29	80	324
1856.		
June 21	280	590
,, 28	320	650
July 5	400	1466
,, 12	420	2106
,, 19	420	1500
,, 26	460	2710
Aug. 2	500	3000
,, 9	500	3500
,, 16	560	3300
,, 23	580	3000
,, 30	580	1500
Sept. 6	570	2200
,, 13	570	3000
,, 20	500	1500
,, 27	480	1500
Oct. 4	440	1000
,, 11	440	1300
,, 18	...	...
,, 25	...	...
Nov. 1	400	4200
,, 8	400	2360
,, 15	...	...
,, 22	250	240
,, 29	160	150
Dec. 6	100	270
,, 13	70	160
,, 20	80	160
,, 27	40	70
1857.		
June 20	200	84
,, 27	280	800
July 4	275	1060
,, 11	480	1380
,, 18	480	1410
,, 25	480	1950
Aug. 1	500	3000
,, 8	530	800
,, 15	580	1000
,, 22	580	2500
,, 29	600	1300
1857.		
Sept. 5	600	1000
,, 12	540	600
,, 19	540	400
,, 26	500	600
Oct. 3	450	700
,, 10	400	800
,, 17	400	1200
,, 24	400	700
,, 31	400	400
Nov. 7	...	...
,, 14	...	...
,, 21	300	1000
,, 28	100	200
1858.		
July 3	300	400
,, 10	450	600
,, 17	460	450
,, 24	480	1100
,, 31	480	2050
Aug. 7	450	1200
,, 14	480	1400
,, 21	480	1500
,, 28	480	950
Sept. 4	520	1000
,, 11	520	1950
,, 18	500	800
,, 25	500	900
Oct. 2	400	800
,, 9	400	300
,, 16	400	1030
,, 23	500	720
,, 30	500	950
Nov. 6	500	1100
,, 13	300	600
,, 20	300	350
,, 27	300	400
Dec. 4	250	450
,, 11	200	300
,, 18	100	550
,, 25	100	100
,, 31	100	1000
1859.		
June 18	220	196
,, 25	290	190
July 2	300	450
,, 9	500	1643
,, 16	480	1800
,, 23	586	1405
,, 30	600	1207

TABLE XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.	Week ended	Boats.	Crans.	Week ended	Boats.	Crans.
1859.			1860.			1862.		
Aug. 6	600	1125	Aug. 4	550	680	June 7	30	...
,, 13	600	800	,, 11	540	500	,, 14	70	2
,, 20	600	510	,, 18	500	600	,, 21	190	103
,, 27	600	315	,, 25	550	2400	,, 28	260	102
Sept. 3	600	400	Sept. 1	550	450	July 5	260	117
,, 10	600	780	,, 8	550	1300	,, 12	400	149
,, 17	600	800	,, 15	500	320	,, 19	500	605
,, 24	450	620	,, 22	550	950	,, 26	530	1021
			,, 29	550	2300			
Oct. 1	400	180				Aug. 2	580	1070
,, 8	400	470	Oct. 6	560	800	,, 9	600	2020
,, 15	400	624	,, 13	460	1100	,, 16	600	1570
,, 22	380	566	,, 20	410	1500	,, 23	585	2660
,, 29	390	84	,, 27	390	1720	,, 30	715	3435
Nov. 5	300	200	Nov. 3	420	2600	Sept.	705	2760
,, 12	340	100	,, 10	430	4500	,, 13	680	2275
,, 19	310	369	,, 17	400	1930	,, 20	670	2880
,, 26	400	3900	,, 24	380	1320	,, 27	675	3810
Dec. 3	400	2900	Dec. 1	380	110	Oct. 4	687	3520
,, 10	150	100	,, 8	208	1950	,, 11	690	3725
,, 17	500	2000	,, 15	228	2450	,, 18	687	2911
,, 24	300	3000	,, 22	190	2430	,, 25	574	1690
,, 31	250	452	,, 29	85	660			
1860.			1861.			Nov. 1	682	3074
Jan. 7	100	300	June 8	172	132	,, 8	770	3778
,, 14	90	470	,, 15	195	97	,, 15	773	4212
,, 21	80	...	,, 22	260	12	,, 22	670	2730
,, 28	50	10	,, 29	454	161	,, 29	610	2399
Feb. 4	35	15	July 6	495	432	Dec. 6	400	432
,, 11	30	23	,, 13	560	690	,, 13	500	2700
,, 18	30	181	,, 20	600	764	,, 20	450	961
,, 25	50	505	,, 27	600	1019	,, 27	350	600
						27-31	150	50
Mar. 3	30	270	Aug. 3	570	808	1863.		
,, 10	40	366	,, 10	565	1335	June 6	85	6
,, 17	35	195	,, 17	565	1980	,, 13	195	85
,, 24	60	630	,, 24	565	400	,, 20	251	69
,, 31	60	294	,, 31	565	800	,, 27	340	215
April 7	50	116	Sept. 7	515	890	July 4	458	608
,, 14	50	152	,, 14	515	890	,, 11	490	481
,, 21	40	75	,, 21	615	1215	,, 18	515	940
,, 28	30	45	,, 28	615	707	,, 25	541	1180
May 5	30	141	Oct. 5	550	431	Aug. 1	539	918
,, 12	20	...	,, 12	570	532	,, 8	767	1733
,, 19	16	24	,, 19	470	672	,, 15	659	1450
,, 26	22	60	,, 26	450	325	,, 22	660	1466
						,, 29	719	1361
June 2	35	42	Nov. 2	350	375			
,, 9	95	68	,, 9	340	162	Sept. 5	710	1122
,, 16	238	188	,, 16	340	29	,, 12	718	823½
,, 23	458	480	,, 23	310	72	,, 19	680	740
,, 30	450	320	,, 30	200	117	,, 26	630	957
July 7	442	473	Dec. 7	267	474	Oct. 3	560	504
,, 14	470	807	,, 14	320	960	,, 10	487	1250
,, 21	550	947	,, 21	350	120	,, 17	650	1346
,, 28	550	999	,, 28	200	170	,, 24	716	1678
			28-31	150	80	,, 31	605	1419

TABLE XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.
1863.		
Nov. 7	530	968
,, 14	532	719
,, 21	460	683
,, 28	411	800
Dec. 5	426	905
,, 12	365	394
,, 19	30	50
1864.		
June 4	62	6
,, 11	242	51½
,, 18	345	234
,, 25	461	745
July 2	593	673½
,, 9	666	860
,, 16	682	1450
,, 23	653	779
,, 30	550	873
Aug. 6	543	721
,, 13	516	486
,, 20	541	366
,, 27	520	1452
Sept. 3	482	554
,, 10	435	240½
,, 17	563	1148½
,, 24	558	605
Oct. 1	538	760½
,, 8	472	725
,, 15	405	338
,, 22	300	279
,, 29	430	926
Nov. 5	240	551
,, 12	121	526
,, 19	60	226
,, 26	50	112
Dec. 3	28	18
,, 10	18	7
,, 17	9	5
1865.		
June 3	64	5
,, 10	149	66
,, 17	297	152
,, 24	355	122
July 1	338	174
,, 8	479	562
,, 15	723	890
,, 22	628	1128
,, 29	635	908
Aug. 5	680	1343
,, 12	667	2967
,, 19	599	2240
,, 26	628	2659
1865.		
Sept. 2	622	4209
,, 9	646	2361
,, 16	552	3123
,, 23	462	984
,, 30	381	1426
Oct. 7	336	411½
,, 14	237	369
,, 21	220	486
,, 28	326	877
Nov. 4	195	225
,, 11	290	395
,, 18	210	246
,, 25	45	18
Dec. 2	...	...
,, 9	10	85
,, 16	8	250
1866.		
June 2	24	4
,, 9	155	99
,, 16	250	181
,, 23	284	209
,, 30	375	362
July 7	525	692
,, 14	425	380
,, 21	428	524
,, 28	603	748
Aug. 4	534	802
,, 11	557	1459
,, 18	543	2503
,, 25	602	2340
Sept. 1	568	1658
,, 8	598	2476
,, 15	478	909
,, 22	550	1384
,, 29	450	570
Oct. 6	600	3260
,, 13	410	3696
,, 20	490	1588
,, 27	475	1203
Nov. 3	375	1108
,, 10	200	239
,, 17	175	215
,, 24	162	486
Dec. 1	155	510
,, 8	140	445
,, 15	105	120
,, 22	113	130
,, 29	103	80
1867.		
Jan. 5	90	217
,, 12	70	200
,, 19	15	10
,, 26	5	...
1867.		
June 8	88	115
,, 15	152	229
,, 22	373	544
,, 29	420	459
July 6	457	539
,, 13	436	1204
,, 20	470	932
,, 27	544	1325
Aug. 3	447	3352
,, 10	448	4320
,, 17	401	1424
,, 24	457	2160
,, 31	470	2909
Sept. 7	533	2114
,, 14	528	982
,, 21	500	1467
,, 28	466	1764
Oct. 5	340	611
,, 12	320	989
,, 19	310	451
,, 26	395	1050
Nov. 2	127	755
,, 9	125	391
,, 16	130	435
,, 23	174	1595
,, 30	180	1470
Dec. 7	170	705
,, 14	140	855
,, 21	124	190
,, 28	145	530
28-31	125	160
1868.		
Jan. 4	135	525
,, 11	145	695
,, 18	130	130
,, 25	125	1130
Feb. 1	45	50
June 6	193	590
,, 13	233	814
,, 20	265	1189
,, 27	275	800
July 4	281	1476
,, 11	341	1963
,, 18	351	2180
,, 25	384	1910
Aug. 1	420	2575
,, 8	406	2019
,, 15	444	2750
,, 22	462	2075
,, 29	420	898

Table XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.	Week ended	Boats.	Crans.	Week ended	Boats.	Crans.
1868.			1870.			1871.		
Sept. 5 ...	479	2481	Jan. 1 ...	55	25	Sept. 2 ...	456	961
,, 12 ...	455	2307	,, 8 ...	80	145	,, 9 ...	437	334
,, 19 ...	450	3058	,, 15 ...	70	210	,, 16 ...	343	546
,, 26 ...	485	1981	,, 22 ...	85	320	,, 23 ...	363	544
			,, 29 ...	56	225	,, 30 ...	162	203
Oct. 3 ...	353	1084						
,, 10 ...	398	2019	June 4 ...	165	500	Oct. 7 ...	194	353
,, 17 ...	426	1363	,, 11 ...	229	895	,, 14 ...	256	1229
,, 24 ...	440	1445	,, 18 ...	254	609	,, 21 ...	327	700
,, 31 ...	205	210	,, 25 ...	312	1430	,, 28 ...	160	90
Nov. 7 ...	75	45	July 2 ...	357	1859	Nov. 4 ...	41	124
,, 14 ...	30	30	,, 9 ...	409	1549	,, 11 ...	70	160
,, 21 ...	32	45	,, 16 ...	455	1725	,, 18 ...	109	60
,, 28 ...	32	60	,, 23 ...	495	2405	,, 25 ..	41	80
			,, 30 ...	521	3005			
Dec. 5 ...	26	25				Dec. 2 ..	20	45
,, 12 ...	65	370	Aug. 6 ...	484	1950	,, 9 ..	18	40
,, 19 ...	75	510	,, 13 ...	616	1659	,, 16 ...	4	...
,, 26 ...	12	225	,, 20 ...	562	1943	,, 23 ...	6	...
1869.			,, 27 ...	562	2420	,, 30 ...	6	...
Jan. 2 ...	2	15						
,, 9 ...	36	560	Sept. 3 ...	681	1119	1872.		
,, 16 ...	72	140	,, 10 ...	512	696	June 1 ...	101	70
,, 23 ...	70	50	,, 17 ...	378	276	,, 8 ...	166	200
,, 30 ...	4	4	,, 24 ...	445	1034	,, 15 ...	207	235
						,, 22 ...	228	205
June 5 ...	188	550	Oct. 1 ...	410	598	,, 29 ...	245	291
,, 12 ...	233	730	,, 8 ...	521	1494			
,, 19 ...	250	1180	,, 15 ...	411	959	July 6 ...	343	695
,, 26 ...	317	2190	,, 22 ...	367	1045	,, 13 ...	419	640
			,, 29 ...	307	729	,, 20 ...	481	1240
July 3 ...	338	1580				,, 27 ...	657	3220
,, 10 ...	467	1035	Nov. 5 ...	393	1633			
,, 17 ...	417	1800	,, 12 ...	328	816	Aug. 3 ...	600	1286
,, 24 ...	504	2275	,, 19 ...	344	800	,, 10 ...	702	2062
,, 31 ...	565	1770	,, 26 ...	300	550	,, 17 ...	687	711
						,, 24 ...	728	1152
Aug. 7 ...	488	2355	Dec. 3 ...	215	325	,, 31 ...	589	1152
,, 14 ...	470	3588	,, 10 ...	80	80			
,, 21 ...	630	4107	,, 17 ...	39	25	Sept. 7 ...	497	1208
,, 28 ...	550	2566	,, 24 ...	23	170	,, 14 ...	349	598
			,, 31 ...	31	195	,, 21 ...	404	2327
Sept. 4 ...	458	4081	1871.			,, 28 ..	476	1353
,, 11 ...	464	2691	Jan. 7 ...	16	140			
,, 18 ...	438	1215	,, 14 ...	54	985	Oct. 5 ...	450	595
,, 25 ...	399	588	,, 21 ...	50	500	,, 12 ...	248	2146
			,, 28 ...	40	215	,, 19 ...	69	40
Oct. 2 ...	381	941				,, 26 ...	18	8
,, 9 ...	452	2237	June 3 ...	127	230			
,, 16 ...	400	1145	,, 10 ...	210	816	Nov. 2 ...	7	5
,, 23 ...	135	302	,, 17 ...	304	730	,, 9 ...	...	...
,, 30 ...	36	95	,, 24 ...	450	1366	,, 16 ...	87	430
						,, 23 ...	240	950
Nov. 6 ...	16	245	July 1 ...	506	1417	,, 30 ...	176	850
,, 13 ...	10	10	,, 8 ...	504	1592			
,, 20 ...	4	5	,, 15 ...	468	826	Dec. 7 ...	256	700
,, 27 ...	...	...	,, 22 ...	640	752	,, 14 ...	36	120
			,, 29 ...	792	640			
Dec. 4 ...	14	35				1873.		
,, 11 ...	32	135	Aug. 5 ...	666	730	June 7 ...	115	332
,, 18 ...	74	490	,, 12 ...	512	1018	,, 14 ...	169	312
,, 25 ...	85	465	,, 19 ...	522	758	,, 21 ...	204	596
,, 31 ...	85	295	,, 26 ...	372	394	,, 28 ...	239	516

TABLE XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.	Week ended	Boats.	Crans.	Week ended	Boats.	Crans.
1873.			1875.			1876.		
July 5	332	820	June 5	70	153	Oct. 7	254	456
,, 12	365	874	,, 12	132	119	,, 14	250	520
,, 19	372	1461	,, 19	216	315	,, 21	210	989
,, 26	955	2444	,, 26	266	558	,, 28	420	5300
Aug. 2	638	2494	July 3	261	544	Nov. 4	300	900
,, 9	634	1014	,, 10	362	1262	,, 11	186	1758
,, 16	449	909	,, 17	340	1850	,, 18	82	158
,, 23	524	1568	,, 24	312	1138	,, 25	100	70
,, 30	624	749	,, 31	271	1998			
						Dec. 2	46	617
Sept. 6	438	896	Aug. 7	388	2456	,, 9	60	...
,, 13	181	217	,, 14	350	818	,, 16	10	...
,, 20	176	631	,, 21	294	1047	,, 23	...	...
,, 27	302	1996	,, 28	319	834	1877.		
						Jan. 27	2	...
Oct. 4	293	792	Sept. 4	302	319			
,, 11	43	143	,, 11	270	300	June 2	?	5
,, 18	153	760	,, 18	149	85	,, 9	99	29
,, 25	105	15	,, 25	76	39	,, 16	164	1638
						,, 23	222	1218
Nov. 1	55	...	Oct. 2	114	47	,, 30	258	892
,, 8	45	...	,, 9	124	119			
,, 15	35	...	,, 16	126	525	July 7	287	1649
,, 22	30	...	,, 23	130	35	,, 14	304	1347
,, 29	20	...	,, 30	166	525	,, 21	301	2535
						,, 28	370	2204
Dec. 6	15	...	Nov. 7	188	910			
1874.			,, 14	93	110	Aug. 4	550	3097
June 6	92	186	,, 21	96	165	,, 11	574	3844
,, 13	149	211	,, 28	80	30	,, 18	298	1976
,, 20	223	771				,, 25	413	1080
,, 27	282	805	Dec. 4	65	115			
			,, 11	106	90	Sept. 1	482	1569
July 4	339	741	,, 18	70	90	,, 8	477	1665
,, 11	480	2049	,, 25	...	...	,, 15	281	248
,, 18	507	1941	,, 31	10	5	,, 22	382	1107
,, 25	566	1016				,, 29	375	2467
			1876.					
Aug. 1	502	881	Jan. 15	6	30	Oct. 6	353	1629
,, 8	669	887	,, 22	4	...	,, 13	376	210
,, 15	480	671				,, 20	266	240
,, 22	558	2416	June 3	74	57	,, 27	134	180
,, 29	373	662	,, 10	112	344			
			,, 17	196	511	Nov. 3	70	660
Sept. 5	277	1125	,, 24	207	244	,, 10	7	60
,, 12	448	894				,, 17	48	150
,, 19	414	1792	July 1	303	752	,, 24	82	...
,, 26	285	567	,, 8	317	684			
			,, 15	310	1686	Dec. 1	70	...
Oct. 3	354	263	,, 22	310	1215	,, 8	78	...
,, 10	175	41	,, 29	346	2824	,, 15	10	...
,, 17	157	555				,, 22	6	...
,, 24	278	87	Aug. 5	345	2585	,, 29	...	...
,, 31	64	1011	,, 12	348	2396	1878.		
			,, 19	326	1186	June 8	151	413
Nov. 7	44	350	,, 26	314	802	,, 15	219	1115
,, 14	98	269				,, 22	256	773
,, 21	4	15	Sept. 2	395	968	,, 29	321	1170
,, 28	...	...	,, 9	410	1216			
1875.			,, 16	390	544	July 6	382	1010
Jan. 23	2	4	,, 23	356	652	,, 13	317	2608
,, 30	4	6	,, 30	481	647	,, 20	333	2908
						,, 27	298	1220

TABLE XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.	Week ended	Boats.	Crans.	Week ended	Boats.	Crans.
1878.			1880.			1881.		
Aug. 3	432	1875	June 5	241	1080	Nov. 5	238	1594
,, 10	319	370	,, 12	280	677	,, 12	328	976
,, 17	337	336	,, 19	337	698	,, 19	240	969
,, 24	295	370	,, 26	417	1692	,, 26	220	1294
,, 31	275	325						
			July 3	470	3320	Dec. 3	244	1094
Sept. 7	211	334	,, 10	470	5958	,, 10	264	1166
,, 14	176	50	,, 17	332	3202	,, 17	277	1673
,, 21	5	...	,, 24	320	3655	,, 24	48	60
,, 28	40	4	,, 31	358	3456	,, 31	...	...
Oct. 5	...	...	Aug. 7	440	4362	1882.		
,, 12	...	...	,, 14	390	2888	June 3	228	468
,, 19	12	14	,, 21	355	786	,, 10	440	942
,, 26	24	10	,, 28	297	1312	,, 17	489	1234
						,, 24	677	3471
Nov. 2	6	...	Sept. 4	244	941			
,, 9	50	1240	,, 11	395	578	July 1	775	4799
,, 16	50	350	,, 18	302	396	,, 8	636	4221
,, 23	105	300	,, 25	479	1896	,, 15	824	5388
,, 30	100	250				,, 22	617	4527
			Oct. 2	472	1207	,, 29	777	6139
Dec. 7	90	100	,, 9	463	660			
,, 14	8	30	,, 16	531	543	Aug. 5	624	3959
1879.			,, 23	476	1500	,, 12	536	5999
May 31	94	276	,, 30	426	1301	,, 19	510	5819
						,, 26	461	5839
June 7	207	611	Nov. 6	602	2100			
,, 14	209	1324	,, 13	430	2089	Sept. 2	474	619
,, 21	295	414	,, 20	500	2496	,, 9	513	3840
,, 28	352	946	,, 27	272	510	,, 16	344	5242
						,, 23	356	3156
July 5	351	1075	Dec. 4	462	2439	,, 30	341	1421
,, 12	374	1999	,, 11	318	1359			
,, 19	296	2005	,, 18	118	1552	Oct. 7	333	3406
,, 26	342	2424	,, 25	105	515	,, 14	324	3851
			1881.			,, 21	353	3294
Aug. 2	332	3372	June 4	234	489	,, 28	365	8032
,, 9	397	3447	,, 11	311	2187			
,, 16	348	3780	,, 18	448	2037	Nov. 4	291	2640
,, 23	298	2406	,, 25	564	1151	,, 11	295	3568
,, 30	287	1557				,, 18	244	2205
			July 2	494	2446	,, 25	252	2327
Sept. 6	323	2275	,, 9	543	2005			
,, 13	304	1480	,, 16	503	1950	Dec. 2	209	684
,, 20	322	1980	,, 23	507	4471	,, 9	80	18
,, 27	320	1242	,, 30	570	4066	,, 16	16	6
Oct. 4	344	1088	Aug. 6	593	3436	1883.		
,, 11	273	1103	,, 13	505	3104	June 9	360	630
,, 18	263	3789	,, 20	266	4725	,, 16	561	828
,, 25	300	3395	,, 27	586	2248	,, 23	616	2417
						,, 30	601	2696
Nov. 1	375	1667	Sept. 3	502	2189			
,, 8	647	4337	,, 10	396	1234	July 7	606	2528
,, 15	588	2137	,, 17	383	1087	,, 14	616	4393
,, 22	530	1515	,, 24	159	939	,, 21	576	3325
,, 29	167	60				,, 28	581	4199
			Oct. 1	158	778			
Dec. 6	110	46	,, 8	150	76	Aug. 4	634	5359
,, 13	82	75	,, 15	164	226	,, 11	527	2010
1880.			,, 22	71	214	,, 18	531	2815
May 29	123	30	,, 29	217	2172	,, 25	655	2062

TABLE XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854-1906—*continued.*

Week ended	Boats.	Crans.
1883.		
Sept. 1 ...	534	3086
,, 8 ...	531	3396
,, 15 ...	380	2889
,, 22 ...	319	1665
,, 29 ..	319	2720
Oct. 6 ...	353	7511
,, 13 ...	337	3876
,, 20 ...	328	625
,, 27 ...	317	1923
Nov. 3 ...	351	4663
,, 10 ...	335	1564
,, 17 ...	339	1475
,, 24 ...	199	173
Dec. 1 ...	285	396
,, 8 ...	157	1491
,, 15 ...	...	...
,, 22 ...	20	...
1884.		
June 7 ...	292	1428
,, 14 ...	440	712
,, 21 ...	549	2055
,, 28 ...	658	2236
July 5 ...	648	1709
,, 12 ...	614	1765
,, 19 ...	620	1922
,, 26 ...	575	4336
Aug. 2 ...	612	3301
,, 9 ...	614	2159
,, 16 ...	488	2511
,, 23 ...	460	3194
,, 30 ...	410	2939
Sept. 6 ...	349	288
,, 13 ...	367	866
,, 20 ...	326	1087
,, 27 ...	330	401
Oct. 4 ...	340	384
,, 11 ...	186	1262
,, 18 ...	414	3998
,, 25 ...	400	4592
Nov. 1 ...	379	24
,, 8 ...	120	812
,, 15 ...	229	3006
,, 22 ...	156	410
,, 29 ...	72	165
1885.		
June 6 ...	328	2226
,, 13 ...	415	2699
,, 20 ...	526	2001
,, 27 ...	511	2789
July 4 ...	618	2978
,, 11 ...	580	2733
,, 18 ..	594	4166
,, 25 ...	528	3285
1885.		
Aug. 1 ...	506	1921
,, 8 ...	503	2329
,, 15 ...	508	2698
,, 22 ...	390	4624
,, 29 ...	469	2150
Sept. 5 ...	463	2558
,, 12 ...	424	4071
,, 19 ...	524	6219
,, 26 ...	140	121
Oct. 3 ...	313	4471
,, 10 ...	436	7814
,, 17 ...	419	494
,, 24 ...	350	976
,, 31 ...	182	3
Nov. 7 ...	137	...
,, 14 ...	12	...
1886.		
June 5 ...	402	1394
,, 12 ...	404	936
,, 19 ...	369	605
,, 26 ...	524	2061
July 3 ...	562	1869
,, 10 ...	474	1348
,, 17 ...	508	1632
,, 24 ...	436	1193
,, 31 ...	403	1234
Aug. 7 ...	472	2168
,, 14 ...	496	1915
,, 21 ...	484	2 43
,, 28 ...	475	2940
Sept. 4 ...	388	2997
,, 11 ...	290	105
,, 18 ...	232	619
,, 25 ...	293	339
Oct. 2 ...	342	645
,, 9 ...	353	363
,, 16 ...	278	209
,, 23 ...	479	758
,, 30 ...	394	977
Nov. 6 ...	272	360
,, 13 ...	254	569
,, 20 ...	364	600
,, 27 ...	530	1761
Dec. 4 ...	275	2448
,, 11 ...	20	135
,, 18 ...	315	5350
1887.		
May 7 ...	118	525
,, 14 ...	126	90
,, 21 ...	136	34
,, 28 ...	152	383
1887.		
June 4 ...	270	764
,, 11 ...	368	987
,, 18 ...	472	1149
,, 25 ...	562	1071
July 2 ...	578	869
,, 9 ...	660	1298
,, 16 ...	595	2049
,, 23 ...	544	3312
,, 30 ...	460	1033½
Aug. 6 ...	421	1807
,, 13 ...	475	1812½
,, 20 ...	437	1213
,, 27 ...	423	1174
Sept. 3 ...	378	768
,, 10 ...	419	1395½
,, 17 ...	437	3599
,, 24 ...	440	6498
Oct. 1 ...	426	765
,, 8 ...	404	1085
,, 15 ...	272	398
,, 22 ...	400	2238
,, 29 ...	414	366
Nov. 5 ...	562	3291
,, 12 ...	834	7087
,, 19 ...	382	42
,, 26 ...	484	447
Dec. 3 ...	560	1897
,, 10 ...	440	1229
,, 17 ...	280	17
,, 24 ...	520	992
1888.		
June 9 ...	252	38
,, 16 ...	331	294
,, 23 ...	374	300
,, 30 ...	537	1183
July 7 ...	631	2743
,, 14 ...	625	2526
,, 21 ...	562	3870
,, 28 ...	567	2698
Aug. 4 ...	388	3920
,, 11 ...	382	3430
,, 18 ...	401	3739
,, 25 ...	492	1461
Sept. 1 ...	528	2439
,, 8 ...	444	1150½
,, 15 ...	450	2136½
,, 22 ...	374	164¾
,, 29 ...	186	746½
Oct. 6 ...	356	1269¼
,, 13 ...	377	2553½
,, 20 ...	430	1639
,, 27 ...	385	333

TABLE XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.	Week ended	Boats.	Crans.	Week ended	Boats.	Crans.
1888.			1890.			1892.		
Nov. 3	388	1465	Sept. 6	103	882½	July 2	489	2470
,, 10	120	...	,, 13	103	1501½	,, 9	469	3156
,, 17	328	908	,, 20	188	1161½	,, 16	442	3195
,, 24	202	146	,, 27	88	276	,, 23	580	6017½
						,, 30	406	5993½
Dec. 1	362	2842	Oct. 4	346	47½			
,, 8	364	1797	,, 11	345	971	Aug. 6	289	5397½
,, 15	476	2388	,, 18	328	810	,, 13	283	2654¾
,, 22	380	2307	,, 25	424	4019	,, 20	276	2538
,, 29	180	250				,, 27	262	2544¼
1889.			Nov. 1	448	381			
June 8	344	691½	,, 8	512	5130	Sept. 3	255	1723
,, 15	433	946½	,, 15	421	394	,, 10	269	2298¾
,, 22	252	804	,, 22	450	1575	,, 17	266	1663
,, 29	368	957	,, 29	407	1417	,, 24	273	2059
July 6	413	1340	Dec. 6	303	1356	Oct. 1	254	700
,, 13	355	2653	,, 13	259	1336	,, 8	280	1637
,, 20	368	3209½	,, 20	149	1595	,, 15	332	1358
,, 27	339	2282	,, 27	268	1059	,, 22	368	1753
			1891.			,, 29	368	487
Aug. 3	267	1961½	June 6	303	850			
,, 10	270	1275¾	,, 13	409	1800	Nov. 5	290	704
,, 17	248	1045¾	,, 20	441	1950	,, 12	330	1336
,, 24	248	1016	,, 27	507	1678	,, 19	328	231
,, 31	247	2588¾				,, 26	334	1290
			July 4	468	3392			
Sept. 7	217	1082½	,, 11	502	4631	Dec. 3	310	400
,, 14	208	237½	,, 18	431	3936	,, 10	320	1166
,, 21	100	1029	,, 25	393	3295	,, 17	300	2751
,, 28	273	3886½				,, 24	260	2000
			Aug. 1	383	5005	,, 31	240	1000
Oct. 5	249	4514	,, 8	270	2009¼	1893.		
,, 12	252	2832	,, 15	281	1640½	June 3	56	69
,, 19	340	3024	,, 22	283	1288	,, 10	477	1353
,, 26	323	3876	,, 29	252	1254½	,, 17	492	821
						,, 24	536	1264
Nov. 2	355	1451	Sept. 5	242	547			
,, 9	344	2245	,, 12	216	1088½	July 1	518	2255
,, 16	361	2741	,, 19	212	988¾	,, 8	540	3137
,, 23	412	5388	,, 26	228	1161	,, 15	472	4683½
,, 30	331	224				,, 22	424	3999
			Oct. 3	232	879	,, 29	372	4765
Dec. 7	202	44	,, 10	264	894¼			
,, 14	283	930	,, 17	271	1268	Aug. 5	335	3458½
,, 21	132	939	,, 24	354	4390	,, 12	258	3851½
,, 28	88	23	,, 31	420	3201	,, 19	287	2543½
1890.						,, 26	236	713
June 7	378	183	Nov. 7	373	5220			
,, 14	462	254	,, 14	322	324	Sept. 2	267	1576
,, 21	551	659	,, 21	298	1633	,, 9	282	1138½
,, 28	626	1997	,, 28	294	4120	,, 16	265	686½
						,, 23	236	511½
July 5	556	3268	Dec. 5	266	958	,, 30	236	364
,, 12	557	4276	,, 12	261	1471	Oct. 7	216	103
,, 19	650	3679½	,, 19	261	1015	,, 14	210	17
,, 26	380	1682	,, 26	261	2240	,, 21	210	152
			26-31	261	2253	,, 28	210	436
Aug. 2	218	2924½	1892.					
,, 9	288	2671	June 4	54	54	Nov. 4	210	1870
,, 16	264	3384	,, 11	332	1505	,, 11	220	800
23	263	1551	,, 18	397	1140	,, 18	210	897
30	242	804½	,, 25	455	2157	,, 25	210	345

TABLE XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.
1893.		
Dec. 2 ...	192	504
,, 9 ...	192	412
,, 16 ...	169	1000
,, 23 ...	171	1065
,, 30 ...	211	2139
1894.		
June 9 ...	231	1582
,, 16 ..	330	2159
,, 23 ...	389	1949½
,, 30 ...	409	5202½
July 7 ...	381	3313½
,, 14 ...	396	5277
,, 21 ...	396	1950
,, 28 ...	380	4254
Aug. 4 ...	426	4964
,, 11 ...	405	2352
,, 18 ...	458	1625½
,, 25 ...	445	3093
Sept. 1 ...	450	2189
,, 8 ...	342	1306
,, 15 ...	325	778½
,, 22 ...	345	1286
,, 29 ...	300	1671
Oct. 6 ...	263	915½
,, 13 ...	160	146
,, 20 ...	150	463½
,, 17 ...	136	59
Nov. 3 ...	106	24
,, 10 ...	80	43
,, 17 ...	210	510
,, 24 ...	209	170
Dec. 1 ...	215	2357
,, 8 ...	258	1991
,, 15 ...	216	2229
,, 22 ...	170	1658
,, 29 ...	130	1573
1895.		
June 8 ...	280	502½
,, 15 ...	358	843½
,, 22 ...	404	732
,, 29 ...	449	1635
July 6 ...	475	2885½
,, 13 ...	516	2123
,, 20 ...	497	2192½
,, 27 ...	350	1584½
Aug. 3 ...	476	2999
,, 10 ...	456	1960½
,, 17 ...	419	1452½
,, 24 ...	292	394½
,, 31 ...	304	778½
Sept. 7 ...	289	965
,, 14 ...	304	532
,, 21 ...	194	137
,, 28 ...	117	80
1895.		
Oct. 5 ...	48	32
,, 12 ...	49	84
,, 19 ...	28	69
,, 26 ...	22	46½
Nov. 2 ...	46	48½
,, 9 ...	168	150
,, 16 ...	157	191
,, 23 ...	154	1071
,, 30 ...	174	506
Dec. 7 ...	150	227
,, 14 ...	168	869
,, 21 ...	178	245
,, 28 ...	22	77
1896.		
June 6 ...	247	496
,, 13 ...	325	530
,, 20 ...	408	911
,, 27 ...	408	1684
July 4 ...	378	2213
,, 11 ...	414	1644
,, 18 ...	462	1322
,, 25 ...	444	1224
Aug. 1 ...	487	851
,, 8 ...	416	2215
,, 15 ...	415	906
,, 22 ...	359	1471
,, 29 ...	403	1103
Sept. 5 ...	441	1308
,, 12 ...	381	960
,, 19 ...	171	419
,, 26 ...	217	736
Oct. 3 ...	266	2766
,, 10 ...	239	854
,, 17 ...	218	442
,, 24 ...	102	55
,, 31 ...	205	745
Nov. 7 ...	209	1568
,, 14 ...	198	189
,, 21 ...	168	427
,, 28 ...	148	718
Dec. 5 ...	144	154
,, 12 ...	136	101
,, 19 ...	132	243
,, 26 ...	63	198
1897.		
June 5 ...	171	372
,, 12 ...	232	823
,, 19 ...	281	240
,, 26 ...	367	1109
July 3 ...	408	2795
,, 10 ..	419	2377
,, 17 ...	424	3081
,, 24 ...	433	3456
,, 31 ...	413	3859
1897.		
Aug. 7 ...	439	3386
,, 14 ...	425	4066
,, 21 ...	404	3338
,, 28 ...	343	3628
Sept. 4 ...	446	5238
,, 11 ...	445	7435
,, 18 ...	399	4314
,, 25 ...	396	4595
Oct. 2 ...	385	3319
,, 9 ...	331	4232
,, 16 ...	234	984
,, 23 ...	262	2523
,, 30 ...	239	2283
Nov. 6 ...	251	1279
,, 13 ...	251	965
,, 20 ...	334	1179
,, 27 ...	324	3277
Dec. 4 ...	286	2047
,, 11 ...	6	70
,, 18 ...	225	1784
,, 25 ...	243	1326
,, 31 ...	107	400
1898.		
June 4 ...	223	673
,, 11 ...	350	1518
,, 18 ...	370	1898
,, 25 ...	378	2770
July 2 ..	368	3814
,, 9 ...	368	4210
,, 16 ...	377	2714
,, 23 ...	439	5431
,, 30 ...	397	4218
Aug. 6 ...	423	2151
,, 13 ...	417	2379
,, 20 ...	490	2640
,, 27 ...	436	3505
Sept. 3 ...	408	1244
,, 10 ...	462	2255
,, 17 ...	497	1926
,, 24 ...	326	2341
Oct. 1 ...	313	705
,, 8 ...	252	1649
,, 15 ...	292	1320
,, 22 ...	289	390
,, 29 ...	270	509
Nov. 5 ...	243	663
,, 12 ...	270	1439
,, 19 ...	270	968
,, 26 ...	333	2823
Dec. 3 ...	211	2645
,, 10 ...	171	1419
,, 17 ...	219	1342
,, 24 ...	188	1229
,, 31 ...	36	278

TABLE XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.
1899.		
June 3	72	209
,, 10	259	1744
,, 17	296	1738
,, 24	329	1005
July 1	354	2576
,, 8	350	3086
,, 15	316	4292
,, 22	373	4159
,, 29	376	3064
Aug. 5	378	5063
,, 12	378	4701
,, 19	438	3396
,, 26	332	1024
Sept. 2	307	2328
,, 9	308	1481
,, 16	347	4296
,, 23	150	1184
,, 30	315	2073
Oct. 7	191	852
,, 14	265	1508
,, 21	193	360
,, 28	193	459
Nov. 4	230	1079
,, 11	230	445
,, 18	290	655
,, 25	308	3303
Dec. 2	300	1033
,, 9	220	644
,, 16	200	1809
,, 23	170	147
,, 30	50	178
1900.		
June 2	280	497
,, 9	328	1583
,, 16	305	818
,, 23	320	2327
,, 30	348	2819
July 7	348	2976
,, 14	328	2828
,, 21	326	5690
,, 28	338	2991
Aug. 4	340	2303
,, 11	350	4338
,, 18	380	3450
,, 25	324	4244
Sept. 1	340	2343
,, 8	350	2993
,, 15	330	3013
,, 22	380	2629
,, 29	330	3759
1900.		
Oct. 6	330	3049
,, 13	250	302
,, 20	330	1652
,, 27	310	634
Nov. 3	274	943
,, 10	300	88
,, 17	280	561
,, 24	270	639
Dec. 1	260	50
,, 8	284	1741
,, 15	150	—
,, 22	120	33
1901.		
May 25	140	38
June 1	150	184
,, 8	325	1444
,, 15	345	790
,, 22	350	1548
,, 29	365	2875
July 6	360	3230
,, 13	360	1984
,, 20	350	2747
,, 27	330	4268
Aug. 3	340	2267
,, 10	390	3420
,, 17	330	3418
,, 24	410	5785
,, 31	320	1248
Sept. 7	330	3338
,, 14	380	4104
,, 21	310	1398
,, 28	350	1578
Oct. 5	300	1529
,, 12	300	386
,, 19	230	154
,, 26	210	50
Nov. 2	120	140
,, 9	130	34
,, 16	140	400
,, 23	190	382
,, 30	278	1008
Dec. 7	260	1490
,, 14	265	341
,, 21	240	1773
,, 28	190	918
1902.		
June 7	360	1115
,, 14	310	1846
,, 21	340	1594
,, 28	360	1191
1902.		
July 5	370	3725
,, 12	370	2289
,, 19	375	4313
,, 26	360	3185
Aug. 2	390	4841
,, 9	400	4096
,, 16	390	5527
,, 23	410	2786
,, 30	410	4970
Sept. 6	410	3125
,, 13	410	3955
,, 20	280	790
,, 27	320	402
Oct. 4	300	820
,, 11	130	1399
,, 18	210	204
,, 25	150	866
Nov. 1	150	1087
,, 8	150	1134
,, 15	?	517
,, 22	162	498
,, 29	160	394
Dec. 6	162	235
,, 13	152	286
,, 20	150	1304
,, 27	200	695
,, 27–31	190	1285
1903.		
June 6	350	686
,, 13	320	841
,, 20	360	1190
,, 27	340	1328
July 4	340	1747
,, 11	331	4390
,, 18	345	3948
,, 25	341	4248
Aug. 1	355	4058
,, 8	360	2868
,, 15	370	3364
,, 22	370	3526
,, 29	375	2516
Sept. 5	375	2066
,, 12	346	1239
,, 19	315	2221
,, 26	290	1679
Oct. 3	246	609
,, 10	170	123
,, 17	140	515
,, 24	176	30
,, 31	144	—

Table XXIII.—Weekly Returns of Boats Fishing and Herrings Landed in Inveraray and Campbeltown Districts, 1854–1906—*continued.*

Week ended	Boats.	Crans.	Week ended	Boats.	Crans.	Week ended	Boats.	Crans.
1903.			1904.			1906.		
Nov. 7 ...	160	48	Dec. 3 ...	162	14	May 5 ...	40	44
,, 14 ...	142	—	,, 10 ...	138	46	,, 12 ...	70	86
,, 21 ...	100	—	,, 17 ...	150	—	,, 19 ...	100	74
,, 28 ...	210	335	,, 24 ...	240	527	,, 26 ...	120	188
			,, 31 ...	240	322			
Dec. 5 ...	220	902						
,, 12 ...	224	164	1905.			June 2 ...	120	130
,, 19 ...	230	265	May 6 ...	60	134	,, 9 ...	180	696
,, 26 ...	246	1480	,, 13 ...	110	360	,, 16 ...	240	1513
,, 26–31...	184	132	,, 20 ...	120	398	,, 23 ...	250	1181
			,, 27 ...	130	78	,, 30 ...	256	708
1904.			June 3 ...	230	266			
May 7 ...	65	17	,, 10 ...	150	1158	July 7 ...	264	1059
,, 14 ...	70	8	,, 17 ...	152	545	,, 14 ...	280	1005
,, 21 ...	90	63	,, 24 ...	237	901	,, 21 ...	280	692
,, 28 ...	120	164				,, 28 ...	300	1752
			July 1 ...	247	528			
June 4 ...	280	720	,, 8 ...	330	1336			
,, 11 ...	303	518	,, 15 ...	325	1584	Aug. 4 ...	330	258
,, 18 ...	294	524	,, 22 ...	320	2147	,, 11 ...	310	386
,, 25 ...	304	1046	,, 29 ...	320	3110	,, 18 ...	140	66
						,, 25 ...	70	17
July 2 ...	314	550	Aug. 5 ...	300	1806			
,, 9 ...	340	769	,, 12 ...	350	1765			
,, 16 ...	340	979	,, 19 ...	350	1319	Sept. 1 ...	40	100
,, 23 ...	340	2057	,, 26 ...	320	456	,, 8 ...	10	1
,, 30 ..	310	1145				,, 15 ...	20	47
			Sept. 2 ...	100	156	,, 22 ...	58	285
Aug. 6 ...	330	1021	,, 9 ...	100	36	,, 29 ...	100	445
,, 13 ...	355	1135	,, 16 ...	80	7			
,, 20 ...	355	815	,, 23 ...	72	165			
,, 27 ...	360	685	,, 30 ...	85	8	Oct. 6 ...	150	1235
						,, 13 ...	150	252
Sept. 3 ...	340	451	Oct. 7 ...	100	124	,, 20 ...	150	2
,, 10 ...	320	143	,, 14 ...	120	153	,, 27 ...	2	—
,, 17 ...	290	424	,, 21 ...	160	32			
,, 24 ...	200	295	,, 28 ...	100	51			
						Nov. 3 ..	10	—
Oct. 1 ...	260	121	Nov. 4 ...	100	21	,, 10 ...	30	255
,, 8 ...	200	45	,, 11 ...	90	100	,, 17 ...	8	—
,, 15 ...	180	103	,, 18 ...	98	44	,, 24 ...	8	—
,, 22 ...	190	47	,, 25 ...	100	100			
,, 29 ...	100	36						
			Dec. 2 ...	110	292	Dec. 1 ..	4	—
Nov. 5 ...	10	—	,, 9 ...	118	17	,, 8 ...	8	—
,, 12 ...	66	—	,, 16 ...	130	933	,, 15 ...	4	5
,, 19 ...	116	—	,, 23 ...	110	58	,, 22 ...	—	—
,, 26 ...	52	2	,, 30 ...	60	—	,, 29 ...	4	50

TABLE XXIV., Showing the Relation of the Phase of the Moon to the Catch of Herrings in Loch Fyne, 1860-1900.

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.	New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1860.				1863.			
Jan. 23...	10	Jan. 8...	470	Jan. 19...	...	Jan. 5...	...
Feb. 21...	505	Feb. 7...	23	Feb. 18...	...	Feb. 3...	...
Mar. 22...	630	Mar. 7...	366	Mar. 19...	...	Mar. 5...	...
Apr. 21...	75	Apr. 5...	116	Apr. 18...	...	Apr. 4...	...
May 20...	60	May 5...	141	May 17...	...	May 3...	...
June 19...	480	June 3...	68	June 16...	39	June 1...	6
July 18...	947	July 3...	473	July 15...	513	July 1...	82
Aug. 16...	600	Aug. 1...	680			July 30...	751
		Aug. 31...	450	Aug. 14...	1443	Aug. 28...	1354
Sep. 15...	320	Sep. 30...	800	Sep. 13...	740	Sep. 27...	504
Oct. 14...	1500	Oct. 29...	2600	Oct. 12...	1346	Oct. 26...	1419
Nov. 13...	1930	Nov. 28...	110	Nov. 11...	719	Nov. 25...	800
Dec. 12...	2450	Dec. 28...	660	Dec. 10...	394	Dec. 25...	...
Total	9507	Total	6957	Total	5194	Total	4916
1861.				1864.			
Jan. 11...	...	Jan. 26...	...	Jan. 9...	...	Jan. 23...	...
Feb. 9...	...	Feb. 25...	...	Feb. 7...	...	Feb. 22...	...
Mar. 11...	...	Mar. 26...	...	Mar. 8...	...	Mar. 23...	...
Apr. 10...	...	Apr. 24...	...	Apr. 6...	...	Apr. 22...	...
May 9...	...	May 24...	...	May 6...	...	May 21...	...
June 8...	132	June 22...	12	June 4...	6	June 19...	400
July 8...	690	July 22...	1019	July 4...	335	July 19...	572
Aug. 6...	1335	Aug. 20...	400	Aug. 2...	618	Aug. 17...	279
Sep. 4...	890	Sep. 19...	1215	Sep. 1...	540	Sep. 15...	1120
Oct. 4...	431	Oct. 18...	672	Sep. 30...	755		
Nov. 2...	375	Nov. 17...	72	Oct. 30...	511	Oct. 15...	338
Dec. 2...	474	Dec. 17...	120	Nov. 29...	18	Nov. 13...	226
Dec. 31...	80			Dec. 28...	...	Dec. 13...	5
Total	4407	Total	3510	Total	2783	Total	2940
1862.				1865.			
Jan. 30...	...	Jan. 16...	...	Jan. 27...	...	Jan. 11...	...
Feb. 28...	...	Feb. 14...	...	Feb. 25...	...	Feb. 10...	...
Mar. 30...	...	Mar. 16...	...	Mar. 27..	...	Mar. 12...	...
Apr. 28...	...	Apr. 14...	...	Apr. 25...	...	Apr. 11...	...
May 28...	...	May 13...	...	May 24...	...	May 10...	...
June 27...	102	June 12...	2	June 23...	42	June 9...	16
July 26...	1021	July 11...	149	July 22...	1007	July 8...	142
Aug. 25...	3435	Aug. 9...	2020	Aug. 21...	2520	Aug. 7...	2683
Sep. 23...	3810	Sep. 8...	2275	Sep. 19...	980	Sep. 5...	2356
Oct. 23...	1690	Oct. 7...	3725	Oct. 19...	486	Oct. 4...	410
Nov. 21...	2730	Nov. 6...	3778	Nov. 18...	246	Nov. 3...	225
Dec. 21...	600	Dec. 6...	432	Dec. 18...	...	Dec. 2...	...
Total	13288	Total	12381	Total	5281	Total	5832

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* The catch for the whole week in which the new or full moon appeared is given in each case.

TABLE XXIV., Showing the Relation of the Phase of the Moon to the Catch of Herrings in Loch Fyne, 1860-1900—*continued.*

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1866.			
Jan. 16...	...	Jan. 1...	...
		Jan. 29...	...
Feb. 15...	...		
Mar. 16...	...	Mar. 1...	...
		Mar. 31...	...
Apr. 15...	...	Apr. 29...	...
May 14...	...	May 29...	...
June 12...	73	June 28...	240
July 12...	234	July 27...	617
Aug. 10...	1270	Aug. 26...	1585
Sep. 9...	908	Sep. 24...	570
Oct. 8...	3696	Oct. 24...	1203
Nov. 7...	239	Nov. 22...	486
Dec. 7...	445	Dec. 21...	130
Total	6865	Total	4831
1867.			
Jan. 6...	200	Jan. 20...	...
Feb. 4...	...	Feb. 18...	...
Mar. 6...	...	Mar. 20...	...
Apr. 4...	...	Apr. 18...	...
May 4...	...	May 18...	...
June 2...	55	June 17...	260
July 1...	295	July 16...	788
July 31...	3096		
Aug. 29...	2810	Aug. 15...	1316
Sep. 27...	1764	Sep. 14...	981
Oct. 27...	755	Oct. 13...	451
Nov. 26...	1470	Nov. 12...	435
Dec. 25...	160	Dec. 11...	855
Total	10605	Total	5086
1868.			
Jan. 24...	1130	Jan. 9...	695
Feb. 23...	...	Feb. 8...	...
Mar. 24...	...	Mar. 8...	...
Apr. 22...	...	Apr. 7...	...
May 22...	...	May 6...	...
June 20...	1045	June 5...	530
July 19...	1800	July 4...	1285
Aug. 18...	1920	Aug. 3...	1955
Sep. 16...	3058	Sep. 2...	2179
Oct. 15...	1363	Oct. 1...	1084
		Oct. 31...	210
Nov. 14...	30	Nov. 30...	25
Dec. 14...	510	Dec. 29...	...
Total	10856	Total	7963

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1869.			
Jan. 12...	140	Jan. 28...	4
Feb. 11...	...	Feb. 26...	...
Mar. 13...	...	Mar. 27...	...
Apr. 12...	...	Apr. 26 ..	...
May 11...	...	May 25...	...
June 10...	530	June 24...	1610
July 9...	780	July 23...	1705
Aug. 7...	1849	Aug. 22...	1509
Sep. 6...	2456	Sept 20...	579
Oct. 5...	2158	Oct. 20...	302
Nov. 3...	245	Nov. 19...	5
Dec. 3...	35	Dec. 18...	490
Total	8193	Total	6204
1870.			
Jan. 2...	145	Jan. 17...	320
Jan. 31...	...		
		Feb. 16...	...
Mar. 2...	...	Mar. 17...	...
Apr. 1...	...	Apr. 15...	...
Apr. 30...	...		
May 30...	...	May 15...	...
June 28...	895	June 13...	305
July 28...	2417	July 12...	1190
Aug. 26...	1778	Aug. 11...	800
Sep. 25...	3089	Sep. 9...	544
Oct. 24...	725	Oct. 9...	939
Nov. 23...	550	Nov. 8...	740
Dec. 22...	170	Dec. 8...	80
Total	9769	Total	4918
1871.			
Jan. 21...	500	Jan. 6...	140
Feb. 19...	...	Feb. 5...	...
Mar. 21...	...	Mar. 7...	...
Apr. 19...	...	Apr. 5...	...
May 19...	...	May 4...	...
June 18...	865	June 3...	230
July 17...	400	July 2...	1325
		July 31...	249
Aug. 16...	410	Aug. 30...	820
Sep. 14...	213	Sep. 28...	101
Oct. 14...	1035	Oct. 28...	90
Nov. 12...	60	Nov. 27...	45
Dec. 12...	...	Dec. 26...	...
Total	3483	Total	3000

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* The catch for the whole week in which the new or full moon appeared is given in each case.

TABLE XXIV., Showing the Relation of the Phase of the Moon to the Catch of Herrings in Loch Fyne, 1860-1900—*continued.*

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.	New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1872.				1875.			
Jan. 10...	...	Jan. 25...	...	Jan. 7...	...	Jan. 21...	4
Feb. 9...	...	Feb. 24...	...	Feb. 6...	...	Feb. 20...	...
Mar. 9...	...	Mar. 25...	...	Mar. 7...	...	Mar. 21...	...
Apr. 8...	...	Apr. 23...	...	Apr. 6...	...	Apr. 20 ..	...
May 7...	...	May 22...	...	May 5...	...	May 20...	...
June 6...	163	June 21...	139	June 3...	95	June 18...	225
July 5...	195	July 20...	300	July 3...	340	July 18...	1020
Aug. 4...	343	Aug. 18...	507	Aug. 1...	1850	Aug. 17...	915
Sep. 3...	335	Sep. 17...	315	Aug. 30...	203		...
Oct. 2...	365	Oct. 16...	30	Sept. 29...	49	Sept. 15...	15
Nov. 1...	5	Nov. 8...	...	Oct. 29...	525	Oct. 14...	525
Nov. 30...	850			Nov. 27...	30	Nov. 13...	110
Dec. 30...	...	Dec. 14...	120	Dec. 27...	5	Dec. 12...	90
Total	2256	Total	1411	Total	3097	Total	2904
1873.				1876.			
Jan. 28...	...	Jan. 13...	...	Jan. 26...	...	Jan. 11...	30
Feb. 27...	...	Feb. 12...	...	Feb. 25...	...	Feb. 9...	...
Mar. 28...	...	Mar. 14...	...	Mar. 25...	...	Mar. 10...	...
Apr. 26...	...	Apr. 12...	...	Apr. 24...	...	Apr. 8...	...
May 26...	...	May. 12...	...	May 23...	...	May 8...	...
June 24...	310	June 10...	125	June 21...	162	June 7...	48
July 24...	263	July 10...	370	July 21...	910	July 6...	445
Aug. 23...	16	Aug. 8...	13	Aug. 19...	609	Aug. 5...	1222
Sept. 21...	36	Sept. 6...	52	Sept. 17...	429	Sept. 3...	622
Oct. 21...	...	Oct. 6...	94	Oct. 17...	989	Oct. 3...	436
Nov. 20...	...	Nov. 4...	...	Nov. 16...	158	Nov. 1...	900
Dec. 19...	...	Dec. 4...	...	Dec. 15...	...	Dec. 1...	617
						Dec. 30...	...
Total	625	Total	654	Total	3257	Total	4320
1874.				1877.			
Jan. 18...	...	Jan. 2...	...	Jan. 14...	...	Jan. 29...	...
Feb. 16...	...	Feb. 1...	...	Feb. 13...	...	Feb. 27...	...
Mar. 18...	...	Mar. 3...	...	Mar. 15...	...	Mar. 29...	...
Apr. 16...	...	Apr. 1...	...	Apr. 13...	...	Apr. 27...	...
May 15...	...	May 1...	...	May. 13...	...	May 27...	...
June 14...	75	June 29...	260	June 11...	24	June 25...	600
July 13...	275	July 29...	228	July 10...	897	July 25...	702
Aug. 12...	98	Aug. 27...	301	Aug. 9...	1735	Aug. 23...	423
Sept. 10...	368	Sept. 25...	359	Sept. 7...	1371	Sept 22...	697
Oct. 10...	30	Oct. 25...	170	Oct. 6...	1587	Oct. 22...	180
Nov. 9...	2	Nov. 23...	...	Nov. 5...	60	Nov. 20...	...
Dec. 9...	...	Dec. 23...	...	Dec. 4...	...	Dec. 20...	...
Total	848	Total	1318	Total	5674	Total	2602

* The catch for the whole week in which the new or full moon appeared is given in each case.

TABLE XXIV., Showing the Relation of the Phase of the Moon to the Catch of Herrings in Loch Fyne, 1860-1900—*continued.*

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1878.			
Jan. 3...	...	Jan. 19...	...
Feb. 2...	...	Feb. 17...	...
Mar. 4...	...	Mar. 18...	...
Apr. 2...	...	Apr. 17...	...
May. 2...	...	May 16...	...
June 1...	...	June 14...	322
June 31...	650		
July 29...	972	July 14...	1465
Aug. 28...	57	Aug. 13...	47
Sept. 26...	4	Sept. 11...	37
Oct. 25...	10	Oct. 11...	...
Nov. 24...	250	Nov. 10...	350
Dec. 23...	...	Dec. 9...	30
Total	1943	Total	2251
1879.			
Jan. 22...	...	Jan. 8...	...
Feb. 21...	...	Feb. 7...	...
Mar. 22...	...	Mar. 9...	...
Apr. 21...	...	Apr. 6...	...
May 21...	...	May 6...	...
June 19...	275	June 4...	393
July 19...	980	July 3...	814
Aug. 17...	1963	Aug. 2...	2076
		Aug. 31...	1304
Sept. 16...	726	Sept. 30...	201
Oct. 15...	840	Oct. 30...	160
Nov. 14...	70	Nov. 28...	5
Dec. 13...	...	Dec. 28...	...
Total	4854	Total	4953
1880.			
Jan. 11...	...	Jan. 27...	...
Feb. 10...	...	Feb. 26...	...
Mar. 11...	...	Mar. 26...	...
Apr. 9...	...	Apr. 24...	...
May 9...	...	May 24...	...
June 7...	190	June 22...	342
July 7...	2650	July 21...	1611
Aug. 6...	1540	Aug. 20...	618
Sept. 4...	520	Sept. 28...	487
Oct. 4...	440	Oct. 28...	220
Nov. 2...	890	Nov. 26...	510
Dec. 2...	650	Dec. 26...	...
Total	6880	Total	3788

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1881.			
Jan. 30...	...	Jan. 15...	...
Feb. 28...	...	Feb. 14...	...
Mar. 29...	...	Mar. 15...	...
Apr. 28...	...	Apr. 14...	...
May 27...	...	May 13...	...
June 26...	1135	June 12...	1165
July 26...	2536	July 11...	186
Aug. 24...	1331	Aug. 9...	1968
Sept 23...	883	Sept. 8...	1121
Oct. 23...	1750	Oct. 7...	60
Nov. 21...	960	Nov. 6...	600
Dec. 21...	...	Dec. 5...	400
Total	8595	Total	5500
1882.			
Jan. 19...	...	Jan. 4...	...
Feb. 18...	...	Feb. 3...	...
Mar. 19...	...	Mar. 5...	...
Apr. 17...	...	Apr. 3...	...
May 17...	...	May 3...	...
June 15...	45	June 1...	23
July 15...	1784	July 1...	3585
		July 30...	1780
Aug. 13...	3370	Aug. 28...	313
Sept. 12...	2502	Sept. 27...	992
Oct. 12...	2894	Oct. 26...	5240
Nov. 10...	3568	Nov. 25...	2327
Dec. 10...	6	Dec. 24...	...
Total	14169	Total	14260
1883.			
Jan. 9...	...	Jan. 23...	...
Feb. 7...	...	Feb. 22...	...
Mar. 9...	...	Mar. 23...	...
Apr. 7...	...	Apr. 22...	...
May 6...	...	May 22...	...
June 5...	6	June 20...	1435
July 4...	1594	July 20...	1977
Aug. 3...	2427	Aug. 1 ...	1384
Sept. 1...	1692	Sept. 16...	1506
Oct. 1...	3647	Oct. 16...	8
Oct. 30...	1158		
Nov. 29...	333	Nov. 14...	165
Dec. 29...	...	Dec. 14...	...
Total	10857	Total	6475

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* The catch for the whole week in which the new or full moon appeared is given in each case.

TABLE XXIV., Showing the Relation of the Phase of the Moon to the Catch of Herrings in Loch Fyne, 1860-1900—*continued.*

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.	New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1884.				1887.			
Jan. 28...	...	Jan. 12...	...	Jan. 24...	...	Jan. 9...	...
Feb. 26...	...	Feb. 11...	...	Feb. 22...	...	Feb. 8...	...
Mar. 27...	...	Mar. 11...	...	Mar. 24...	...	Mar. 9...	...
Apr. 25...	...	Apr. 10...	...	Apr. 23...	...	Apr. 8...	...
May 24...	...	May 10...	...	May 22...	383	May 7...	525
June 23...	1284	June 8...	480	June 21...	575	June 5...	940
July 22...	1186	July 8...	990	July 20...	1769	July 5...	268
Aug. 20...	1546	Aug. 6...	1288	Aug. 19...	392	Aug. 3...	1289
Sept. 19...	792	Sept. 5...	248	Sep. 17...	716	Sep. 2...	413
Oct. 19...	14	Oct. 4...	63	Oct. 16...	184	Oct. 2...	20
Nov. 17...	...	Nov. 3...	...			Oct. 31...	168
Dec. 17...	...	Dec. 2...	...	Nov. 15...	...	Nov. 30...	22
				Dec. 14...	...	Dec. 30...	...
Total	4822	Total	3069				
				Total	4019	Total	3645
1885.							
				1888.			
Jan. 16...	...	Jan. 1...	...				
Feb. 15...	...			Jan. 13...	...	Jan. 28...	...
Mar. 16...	...	Mar. 1...	...	Feb. 11...	...	Feb. 27...	...
		Mar. 30...	...	Mar. 12...	...	Mar. 27...	...
Apr. 15...	...	Apr. 29...	...	Apr. 11...	...	Apr. 26...	...
May 14...	...	May 28...	...	May 11...	...	May 25...	...
June 12...	1744	June 27...	2112	June 9...	18	June 23...	184
July 12...	1745	July 27...	959	July 9...	1518	July 23...	1738
Aug. 10...	905	Aug. 25...	1361	Aug. 7...	2608½	Aug. 21...	1073
Sep. 8...	1643	Sep. 24...	...	Sep. 6...	592½	Sep. 20...	64
Oct. 8...	3050	Oct. 23...	9	Oct. 5...	360½	Oct. 19...	267
Nov. 6...	...	Nov. 22...	...	Nov. 4...	...	Nov. 18...	...
Dec. 6...	...	Dec. 21...	...	Dec. 3...	...	Dec. 18...	...
Total	9087	Total	4441	Total	5097½	Total	3326
1886.				1889.			
Jan. 5...	...	Jan. 20...	...	Jan. 1...	...	Jan. 17...	...
Feb. 4...	...	Feb. 18...	...			Feb. 15...	...
Mar. 5...	...	Mar. 20...	...	Mar. 1...	...		
Apr. 4...	...	Apr. 18...	...	Mar. 31...	...	Mar. 17...	...
May 4...	...	May 18...	...	Apr. 30...	...	Apr. 15...	...
June 2...	581	June 16...	451	May 29...	...	May 15...	...
July 1...	1502	July 16...	912	June 28...	449	June 13...	356½
July 31...	596			July 28...	1397½	July 12...	1862½
Aug. 29...	1082	Aug. 14...	1251	Aug. 26...	1655	Aug. 11...	676½
Sep. 27...	120	Sep. 13...	552	Sep. 25...	1825	Sep. 9...	207½
Oct. 27...	43	Oct. 13...	63	Oct. 24...	1671	Oct. 9...	1060
Nov. 25...	95	Nov. 11...	46	Nov. 23...	493	Nov. 7...	485
Dec. 25...	...	Dec. 11...	...	Dec. 22...	...	Dec. 7...	...
Total	4019	Total	3275	Total	7490½	Total	4648

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* The catch for the whole week in which the new or full moon appeared is given in each case

Table XXIV., Showing the Relation of the Phase of the Moon to the Catch o Herrings in Loch Fyne, 1860-1900—*continued.*

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.	New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1890.				1893.			
Jan. 20...	...	Jan. 6...	...	Jan. 18...	...	Jan. 2...	...
Feb. 19...	...	Feb. 5...	...	Feb. 16...	...	Feb. 1...	...
Mar. 20...	...	Mar. 6...	...	Mar. 18...	...	Mar. 2...	...
Apr. 19...	..	Apr. 5...	...	Apr. 16...	...	Apr. 1...	...
May 18...		May 4...	...	May 15...	...	May 30...	...
June 17...	258	June 3...	160	June 14...	464	June 29...	1237
July 17...	3006	July 2...	2213	July 13...	3577½	July 28...	3320
Aug. 15...	3373½	Aug. 30...	800½	Aug. 11...	2866½	Aug. 27...	1559½
Sep. 14...	1161½	Sep. 28...	...	Sep. 10...	686½	Sep. 25...	364
Oct. 13...	698	Oct. 27...	303	Oct. 9...	17	Oct. 25...	436
Nov. 12...	184	Nov. 26...	1417	Nov. 8...	800	Nov. 23...	345
Dec. 12...	1336	Dec. 26...	954	Dec. 8...	412	Dec. 23...	1000
Total	10017	Total	5847½	Total	8823½	Total	8261½
1891.				1894.			
Jan. 10...	...	Jan. 25...	...	Jan. 7...	...	Jan. 21...	...
Feb. 9...	...	Feb. 23...	...	Feb. 5...	...	Feb. 20...	...
Mar. 10...	...	Mar. 25...	...	Mar. 7...	...	Mar. 21...	...
Apr. 8...	...	Apr. 24...	...	Apr. 6...	...	Apr. 20...	...
May 8...	...	May 23...	...	May 5...	...	May 19...	...
June 6...	779	June 22...	358	June 3...	66	June 18...	1125
July 6...	1562	July 21...	1965	July 3...	2946	July 17...	1428
Aug. 4...	1069¼	Aug. 19...	996	Aug. 1...	4136	Aug. 16...	759½
Sep. 3...	426½	Sep. 18...	988¾	Aug. 30...	1089		
Oct. 3...	792	Oct. 17...	1016	Sep. 29...	1125	Sep. 15...	607
Nov. 1...	5001	Nov. 16...	1593	Oct. 28...	20	Oct. 14...	424
Dec. 1...	958	Dec. 15...	1015	Nov. 27...	2357	Nov. 13...	510
Dec. 31...	2253			Dec. 27...	1573	Dec. 12...	2229
Total	12840¾	Total	7931¾	Total	13312	Total	7082½
1892.				1895.			
Jan. 29...	...	Jan. 14...	...	Jan. 25...	...	Jan. 11...	...
Feb. 28...	...	Feb. 12...	...	Feb. 24...	...	Feb. 9...	...
Mar. 28...	...	Mar. 13...	...	Mar. 26...	...	Mar. 11...	...
Apr. 26...	...	Apr. 12...	...	Apr. 25...	...	Apr. 9...	...
May 26...	...	May 11...	...	May 24...	...	May 8...	...
June 24...	1118	June 12...	709	June 22...	448	June 7...	263
July 23...	4055½	July 10...	1096	July 22...	1029	July 6...	1458
Aug. 22...	2503	Aug. 8...	1805	Aug. 20...	359½	Aug. 5...	1249½
Sep. 21...	2038	Sep. 6...	2296½	Sep. 18...	134	Sep. 4...	955
Oct. 20...	1014	Oct. 6...	1449	Oct. 18...	49	Oct. 3...	27
Nov. 19...	211	Nov. 4...	679	Nov. 16...	177	Nov. 2...	18½
Dec. 19...	2000	Dec. 4...	1000	Dec. 16...	213	Dec. 2...	227
Total	12939½	Total	9034½	Total	2409½	Total	4198

* The catch for the whole week in which the new or full moon appeared is given in each case.

TABLE XXIV., Showing the Relation of the Phase of the Moon to the Catch of Herrings in Loch Fyne, 1860-1900—*continued*.

New Moon.	*Catch in Crans.	Full Moon.	*Catch in Crans.
1896.			
Jan. 14...	...	Jan. 30...	...
Feb. 13...	...	Feb. 28...	...
Mar. 14...	...	Mar. 29...	...
Apr. 13...	...	Apr. 27...	...
May 12...	...	May 26...	...
June 11...	236	June 25...	668
July 10...	905	July 24...	753
Aug. 9...	491	Aug. 23...	429
Sep. 7...	684	Sep. 21...	246
Oct. 6...	654	Oct. 21...	55
Nov. 5...	1515	Nov. 20...	427
Dec. 4...	128	Dec. 20...	...
Total	4613	Total	2578
1897.			
Jan. 3...	...	Jan. 18...	...
Feb. 1...	...	Feb. 17...	...
Mar. 3...	...	Mar. 18...	...
Apr. 2...	...	Apr. 17...	...
May 1...	...	May 16...	...
May 31...	...		
June 30...	719	June 14...	154
July 29...	2222	July 14...	1307
Aug. 28...	2216	Aug. 12...	3204
Sept. 26...	2302	Sept. 11...	5831
Oct. 25...	2121	Oct. 10...	320
Nov. 24...	2949	Nov. 9...	886
Dec. 23...	1320	Dec. 9...	70
Total	13849	Total	11772
1898.			
Jan. 22...	...	Jan. 8...	...
Feb. 20...	...	Feb. 6...	...
Mar. 22...	...	Mar. 8...	...
Apr. 20...	...	Apr. 6...	...
May 20...	...	May 6...	...
June 19...	971	June 4...	95
July 18...	3960	July 3...	2047
1898 (*cont'd*).			
Aug. 17...	2001	Aug. 2...	1880
Sept. 16...	1697	Sept. 29...	539
Oct. 15...	1212	Oct. 29...	481
Nov. 14...	510	Nov. 28...	1383
Dec. 13...	...	Dec. 27...	...
Total	10351	Total	6425
1899.			
Jan. 11...	...	Jan. 26...	...
Feb. 10...	...	Feb. 25...	...
Mar. 11...	...	Mar. 27...	...
Apr. 10...	...	Apr. 25...	...
May 9...	...	May 25...	...
June 8...	678	June 23...	1386
July 7...	1832	July 22...	2666
Aug. 6...	3320	Aug. 21...	934
Sept. 5...	579	Sept. 19...	329
Oct. 4...	740	Oct. 18...	360
Nov. 3...	1079	Nov. 17...	437
Dec. 3...	644	Dec. 17...	134
Total	8872	Total	6246
1900.			
Jan. 2...	...	Jan. 16...	...
Jan. 31...	...	Feb. 14...	...
Mar. 1...	...	Mar. 16...	...
Mar. 30...	...		
Apr. 29...	...	Apr. 15...	...
May 28...	124	May 14...	...
June 27...	1635	June 13...	417
July 26...	1194	July 12...	1457
Aug. 25...	2480	Aug. 10...	357
Sept. 23...	1129	Sept. 9...	511
Oct. 23...	97	Oct. 8...	232
Nov. 22...	525	Nov. 6...	24
Dec. 22...	33	Dec. 6...	1399
Total	7187	Total	4397

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* The catch for the whole week in which the new or full moon appeared is given in each case.

II.—THE FOOD VALUE OF THE HERRING.

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Part II.

The Herring of the East Coast of Scotland.

In my previous paper, published in last year's Report, I dealt with the food value of the herring in the Loch Fyne and neighbouring areas, and, at the desire of the Fishery Board, I have carried out a similar investigation dealing with the fish of the East Coast. The general plan of investigation was the same in the later investigation. In only one important respect did it differ, namely, in the addition of one analysis, that of the coagulable proteids of the muscle of herring.

It is therefore only necessary to describe this method of analysis, and the reader is referred to the earlier paper for a description of the other methods.

Under the heading "Proteid" in the analytical tables of the earlier paper the amounts were given as calculated from the total nitrogen of the muscle, multiplied by the "proteid" factor, 6·25.

In this investigation it was thought advisable to estimate the coagulable proteid.

The method of estimation was as follows :—

Five grammes of minced fresh muscle were taken and placed in a mortar and 5 grammes of absolutely anhydrous sodium sulphate were added. The salt and the muscle were thoroughly mixed together so that the water of the latter might be taken up by the former anhydrous salt. About 100cc. methylated spirit were then added, and the mixture placed in a flask with a reflux condenser fitted to it. The mixture was then boiled for about three-quarters of an hour to ensure complete coagulation of the muscle proteids. The alcohol was then decanted off and the residue extracted with fresh quantities of boiling distilled water until the washings were free from sulphate. The coagulated muscle proteid, which was then left, was incinerated with sulphuric acid, cupric and potassium sulphate, and the nitrogen estimated in the usual way by Kjeldahl's method. On multiplying the amount of nitrogen by 6·25 the amount of "coagulable" proteid was obtained.

The results of the analyses are given in the following tables, which deal with the several batches of herrings sent to me by the Fishery Board.

In conclusion, I have given a table collecting the results of the analyses of the muscle of the female fish at various stages of reproductive activity. It was not necessary in this investigation to analyse the ovarian substance, as that was done sufficiently thoroughly in the earlier paper.

Under the heading "Per average fish" the amounts of the various nutritive principles in the average fish of the series are given after deduction of one-third of the weight to cover the amount of bones, skin, &c.

FRASERBURGH, JULY 7, 1906.

These herrings were caught 30 miles N.N.E. from Kinnaird Head, and were of the class known as "Fulls." In the catch, however, which would be about 25 crans, the bulk consisted of much smaller immature fish.

*Length.	Girth.	Weight.	Ovaries.	Diameter of Ova.
Cm.	Cm.	Gm.	Gm.	Mm.
25	14½	163	16·66	·6–·8
26	15½	204	30·50	·9
26	14½	190	33·02	·9
26	13½	161	20·35	·6–·7
26	14	175	17·19	·6–·7
Avg. 26	14	178·6	23·54	

*The measurements (length and girth) are given in centimetres, and the weights in grammes. The diameter of the ova is given in millimetres.

The muscle of the male fish was also analysed, but the results of the analyses were practically identical with the female muscle, and so will not be given.

Fresh Muscle of Females :—

(*a*) Percentages.

Water.	Total Proteid.	Coagulable Proteid.	Fat.
65·24	19·21	16·50	12·44

(*b*) Per average fish (muscles).

Total Proteid.	Coagulable Proteid.	Fat.
22·85	19·63	14·80

BRESSAY, SHETLAND, JULY 10, 1906.

These herrings were sent by the fishery officer, labelled "Fulls," but, as will be seen from the table, they were by no means fully developed.

Length.	Girth.	Weight.	Weight of Ovaries.	Diameter of Ova.
26½	13½	170	6·75	·45
28	13½	178	5·20	·45
26	13	155	3·61	·45
28	13½	184	5·15	·45
27	13½	156	15·31	·50
29	14	198	20·80	·4–·5
27	13	176	5·35	·35–·4
Avg. 27·3	13·4	174	8·88	

(*a*) Percentages.

Water.	Total Proteid.	Coagulable Proteid.	Fat.
60·83	19·21	16·26	14·68

(*b*) Per average fish (muscles).

Total Proteid.	Coagulable Proteid.	Fat.
22·28	18·86	17 02

As the muscles of the male fish were richer in fat than those of the females, the analyses are also given.

Males (Bressay Herring)—Measurements.

Length.	Girth.	Weight.	Weight of Testes.
26	13	142	23·0
28	14	205	17·2
26	14	181	22·5
27	13	147	5 1
25	14	142	21·7
26	14	184	19·1
Avg. 26·3	13·6	167	18·1

(*a*) Percentages.

Water.	Total Proteid.	Coagulable Proteid.	Fat.
57·55	20·60	13·54	17·14

(*b*) Per average fish.

Total Proteid.	Coagulable Proteid.	Fat.
22 94	15·08	19·09

LERWICK, AUGUST 9, 1906.

Three batches of herrings were sent on August 9, by Mr. R. Duthie, classed respectively as "Fulls," "Matties," and "Spents." As there were, however, differences in those sent as "Matties," these were subdivided into two sets.

A.—Eight Large Full Herrings—Five Females.

Females.

Length.	Girth.	Weight.	Weight of Genitals.	Diameter of Ova.
31	15·5	245	60·4	·9
30	15·5	241	51·8	1·0
30	14	212	33·8	·9
31	15	247	56·5	·9
32	16	282	51·8	·8
Avg. 30·8	15·2	245·4	50·8	·9

Males.

Length.	Girth.	Weight.	Weight of Genitals.
30	15	234	51·9
30	15	202	35·4
30	16	267	55·9
Avg. 30	15·3	234	47·7

A. *Muscle* (*Females*).

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
65·25	21·26	16·37	7·53

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
34·78	26·78	12·31

A. *Muscle* (*Males*).

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
64·20	21·67	18·28	9·72

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
33·80	28·51	15·16

B.—" *Malties* " *sent from Lerwick, August* 9, 1906.

As some of the herring sent were spent and others contained moderately large ovaries with fairly well developed ova, they were divided into two sets—B. and Ba.

B.

Length.	Girth.	Weight.	Weight of Ovaries.	Diameter Ova.
24·5	13	134	15·5	·7
25·5	13	140	15·5	·7
25	13	137	15·5	·7

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
57·27	21·10	16·90	16·68

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
19·28	15·44	15·24

Bᴀ.—*Lerwick* (*August* 9, 1906).

Length.	Girth.	Weight.	Weight of Ovaries.	Diameter of Ova.
27	11	130	2·2	Spent.
26	12	132	0·2	„
26	12	120	1·4	„
26	13	138	1·4	„
Avg. 26·25	12	130	1·3	...

There were large numbers of very immature ova within the capsules of the spent ovaries.

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
63·24	21·67	...	10·42

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
18·78	...	9·03

C.—*Spent Herrings* (*Lerwick*), *August* 9, 1906.

Females.

Length.	Girth.	Weight.	Weight of Ovaries.	Ova.
29	13	163	2·1	Spent, but with large numbers of very small ova, ·05–1mm.
30	14	180	2·7	
29	13	147	1·3	
28	13	150	2·0	
28	14	158	2·0	
Avg. 28·8	13·4	159·6	2·02	

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
67·29	19·02	16·00	8·19

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
20·23	17·02	8·71

C.—*Males.*

Length.	Girth.	Weight.	Weight of Testes.
28	13	138	1·4
31	14	214	2·8
29	14	178	2·9
28	13	130	1·8
29	13	165	1·9
Avg. 29	13·4	174	2·16

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
66·65	22·23	17·20	6·57

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
25·78	19·95	7·62

KINNAIRD HEAD, AUGUST 9, 1906.

Four batches of herrings were sent on August 9, 1906. They were caught 18 miles north-east from Kinnaird Head, and were labelled by the fishery officer as—No. I., "Large Fulls"; No. II., "Spents"; No. III., "Matt. Fulls"; No. IV., "Matties." I shall give the analyses of each set in the above order.

No. I.—"*Large Fulls.*"

Females.

Length.	Girth.	Weight.	Weight of Ovaries.	Diameter of Ova.
29	16	230	49	1mm.
29	15	215	41	·8–·9
30	15	228	51	·8–·9
29	17	231	51	·9
29	14	223	43	·8–·9
29	14	213	45	·9
Avg. 29·1	15·1	223·3	46·6	

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
64·84	20·28	13·28	9·06

(*b*) Per average fish.

Total Proteid.	Coag. Proteid	Fat.
30·19	19·77	13·49

No. I.—*Males.*

Length	Girth.	Weight.	Weight of Testes.
29	15	219	42
29	15	213	44
29	15	215	42
29	14	198	40
29	17	240	50
30	15	237	43
Avg. 29	15·1	220·3	43·5

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
63·72	20·39	17·28	8·43

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
29·95	25·38	12·38

No. II.—"*Spents,*" *August* 9, 1906.

Length.	Girth.	Weight.	Weight of Ovaries.	Ova.
30	12	135	1·65	Spent ovaries, but large numbers of developing ova present.
30	13	159	2·00	
28	13	157	2·07	
29	12	150	1·97	
28	11	148	2·44	
Avg. 29	12·2	149·8	2·02	

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
65·09	19·90	12·66	6·14

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
19·18	12·64	6·14

No. III.—"*Matt. Fulls,*" *August* 9, 1906.

Length.	Girth.	Weight.	Weight of Ovaries.	Diameter of Ova.
26	13½	167	26·7	·9
25	13½	153	17·7	·9
25	13	152	26·8	·9
25	13½	148	28·5	·9–1
25	13	134	15·5	·9
Avg. 25·2	13·3	150·8	23·04	

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
57·29	23·81	17·31	15·13

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
23·81	17·31	15·13

No. IV.—"*Matties,*" *August* 9, 1906.

Length.	Girth.	Weight.	Weight of Ovaries.	Diameter of Ova.
23·5	11	99	8·4	·5–·7
23·5	11·5	112	3·6	·4–·5
23·5	10·5	102	6·8	·5
24	12	114	1·8	·4
24	12	124	0·6	·08–·1
24·5	11	111	1·0	·08–·1
23	10·5	100	3·0	·4
Avg. 23·7	11·2	108	3·6	

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
55·72	21·16	16·92	15·50

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
15·23	12·18	11·16

LERWICK, SEPTEMBER 1, 1906.

Two boxes of herrings were sent from Lerwick, one set being mature and the other spent.

As a very large number were measured and weighed, it will be sufficient in each case simply to give the average measurements and weights.

I.—*Large Mature Herring.*

	Length.	Girth.	Weight.	Weight of Ovaries.	Diameter of Ova.
Avg.	29·5	15	240	50	1·2

The herring were just about to spawn.

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
60·23	20·72	16·92	12·44

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
33·15	27·07	19·90

II.—*Spent Herring* (*Lerwick*), *September* 1, 1906.

Length.	Girth.	Weight.	Weight of Ovaries.
Avg. 29	13	171	These consisted only of collapsed membranes containing large numbers of very small ova.

(*a*) Percentages.

Water.	Total Proteid.	Coag. Proteid.	Fat.
63·51	22·55	17·20	9·32

(*b*) Per average fish.

Total Proteid.	Coag. Proteid.	Fat.
25·70	19·60	10·62

In order to be able readily to compare the composition of the muscular tissue of the East Coast herrings in different stages of reproductive activity, it is advisable to give a table which gives the collective results.

Date.	Place.	AVERAGES.					PERCENTAGES.			
		Length.	Girth.	Weight.	Weight of Ovaries.	Diam. of Ova.	Water.	Total Proteid.	Coag'ble Proteid.	Fat
July 7th, 1906, ..	Fraserburgh, ...	26	14·4	178·6	23·54	6–·9	65·24	19·21	16·5	12·44
July 10th, 1906, ..	Bressay, ...	27·3	13·4	174	8·88	·3–·5	60·83	19·21	16·2	14·68
Aug. 9th, 1906, ..	Lerwick—									
	A. "Fulls,"	30·8	15·2	245·4	50·8	·9–·1	65·25	21·26	16·37	7·53
	B. "Matties," ..	25	13	137	15·5	·7	57·27	21·10	16·90	16·68
	Ba. "Matties," ..	26	12	130	1·3	Spent, but with small ova.	63·24	21·67	..	10·42
	C. "Spents," ..	28·8	13·4	159·6	2·02	Spent.	67·29	19·82	16·00	8·19
	Kinnaird Head—									
Aug. 9th, 1906, ..	I. "Fulls,"	29·1	15·1	223·3	46·6	·8–·1	64·84	20·28	13·28	9·06
	II. "Spents," ..	29	12·2	149·8	2·02	Spent.	65·09	19·90	12·66	6·15
	III. "Matt. Fulls,"..	25·2	13·3	150·8	23·04	·9–·1	57·29	23·81	17·31	15·13
	IV. "Matties," ..	23·7	11·2	108	3·6	·1–·7	55·72	21·16	16·92	15·50
Sept. 1st, 1906, ..	Lerwick—									
	I. "Fulls,"	29·5	15	240	50	1·2	60·23	20·72	16·92	12·44
	II. "Spents," ..	29	13	171	Spent	Spent	63·51	22·55	17·20	9·32

One may shortly summarise the results of these analyses of autumn East Coast herrings as follows. The analyses in the table refer solely to the flesh (muscles) of female herrings.

(1) Referring, in the first place, to the herrings obtained in August and September, the water percentage is highest in large spent fish, and following closely upon this comes the large full fish.

Spent " Matties " (Ba.) have a slightly lower water percentage than the large full herrings. The unspent " Matties " (B.) and the " Matt. Fulls " (No. III., August 9th) contain practically the same amount of water. The lowest percentage of water was present in the " Matties " of August 9th.

The only point of importance in connection with the water in the muscles of the July herring is that, with the increase in development of the ovaries, there is an increase in the water content of the muscles.

One may therefore state shortly that the water percentage of the muscles rises as the ovaries become more mature, and the maximum is reached when the fish are spent.

(2) *The Total Proteid Percentage.*—There are but slight variations in this. It was highest in the " Matt. Fulls " of August 9th and lowest in the " Spents " (C.) of August 9th. As however may be seen from the table, the proteid percentage in spent fish may be very high.

(3) *Coagulable Proteid.*—This is more important as an indication of the nutritive value, as it represents the proteids which are coagulated on boiling the fish.

Referring to the Lerwick and Kinnaird Head herrings (August 9th), which are more easily compared, the highest percentage is present in the " Matt. Fulls " and " Matties " and the lowest in the " Spents " and " Fulls." The September Lerwick herring—" Fulls " and " Spents "—contained, however, a high percentage of coagulable proteid.

(4) *Fats.*—The percentage amount of fat in the fish is probably regarded by most people as the best standard for estimating its nutritive value. It is in many respects the most valuable indication of the value of the herring; but, as pointed out in my previous paper, it must not be regarded as the sole one.

There can be no doubt about the results of the analyses. The herrings richest in fat are the " Matties " and " Matt. Fulls," the poorest the " Large Spents " and " Large Fulls." The lowest fat percentage was present in the "Large Spents " obtained from Kinnaird Head on August 9th.

Taken as a whole, the spent fish have a lower fat percentage than the corresponding full fish, but it is possible that in some cases the fat percentage of even spent fish may be higher than that of " Fulls." One may easily understand how this may occur, as the fish may have commenced to store fat again. For example, the spent fish obtained from Lerwick on August 9th were evidently, so far as the fat percentage was concerned, in slightly better condition than the Lerwick mature fish and also than the Kinnaird Head spent fish.

In conclusion, on comparing these East Coast herrings with the West Coast fish (see previous paper), one is mainly struck by the lower water and higher proteid and fat percentages in the former than the latter.

I never obtained such low fat percentages in the East Coast fish as were obtained in some of the winter West Coast herrings. There are many other points of interest in the tables, but these can be readily appreciated by a study of the various analyses. I have not grouped together the results of the analyses of the male fish, as this was scarcely necessary.

From a study of the tables given in this paper, and the preceding series of analyses (West Coast herrings), one is struck by the fact that the fish which possess, as a rule, the highest percentage of fat in their muscles are those whose ovaries are still some time short of full maturity. Usually fish with ovaries of 15·20 grammes weight (weight at full maturity about

60 grammes) contain the highest percentage of fat in their muscles. From a careful examination of all the tables, one is led, however, to believe that practically until full maturation of the ovaries, there is an increase in the weight of the fish, while after spawning the loss of weight is greater than can be accounted for from the discharge of the ova.

It is quite probable that the decrease in fat of the muscles is accompanied by an increase in water. It is unfortunate that, especially in the case of the herring muscle, it is difficult to obtain reliable figures for the water percentage. There can be no doubt, however, that there is an increase in the water percentage of the muscles in spent fish. As regards the fat, there can be no doubt that there is a gradual loss of this important food material during the later stages of maturation, succeeded by a serious loss after the spawning of the fish. This loss after spawning is evidently a very rapid one as, although there must be a short period after spawning when the spent fish contains practically the same amount of fat as the full fish, it is rare that one observes this in analyses, and when one does so it is possibly in some cases due to the fact that one is examining a spent fish that is in the period of recuperation.

When one remembers that the fat is the stored material which will be used up before the proteids of the muscles after the food intake becomes insufficient to cover the body requirements, one is led to suppose that, for some time before full maturation of the ova, the fish either ceases to feed or, what is more likely, takes an insufficient supply to prevent a loss of the body fat. The analyses which I have made support, therefore, in the main, Heincke's conclusions as to the various stages in the reproductive life of the herring (*Twenty-fourth Annual Report of the Fishery Board for Scotland*, Part III., p. 102). If my supposition be correct, then the fish is at its best, regarded as a sourse of nutritive material, at a period somewhat short of full maturity of the genitalia.

The herring is, however, very unlike the salmon in that there is certainly no prolonged period during which the fish refrains from food. There is only probably a short period in the reproductive life of the herring comparable to that in the case of the salmon, and that is the month, or probably two months, just preceding spawning, when the fish has not only to obtain the necessary energising material for work from its own tissues, but has also to supply the growing ovaries or testes from the same source. It is, however, after spawning that the muscles of the fish lose the largest amount of their stored nutritive material, and it is then that the most undoubted loss of weight occurs, over and above that which can be accounted for by the complete discharge of the ovaries.

There are two periods during which it would be most interesting to know the changes which the nitrogenous constituents of the muscles are undergoing, namely, in the first place, during the later stages of maturation and earlier period in the spent condition (a condition of starvation), and secondly, in a later stage after spawning when recuperation is taking place.

I am at present investigating this subject of the alterations in the chemical nature of the proteids of the herring's muscles during different periods of reproductive activity.

I would like to thank the various fishery officers for the care and trouble taken in the packing and preservation of the fish. Without their valuable assistance it would have been impossible to get the fish in proper condition for chemical investigation.

ERRATA* REFERRING TO PAPER IN PART III. OF TWENTY-FOURTH ANNUAL REPORT.

(To be Corrected also in Tables on pp. 99 and 100, where the Analyses are collected together).

Page 91.—Series B.

Muscles—(*b*).

	Proteid.	Fat.	P_2O_5
	18·99	16·25	·73
instead of	14·80	12·51	·55

Ovaries—(*b*) ·08 instead of ·05 P_2O_5

Males—

Muscle—(*b*).

	Proteid.	Fat.	P_2O_5
	17·91	13·98	·55
instead of	18·44	14·39	·57

Testes—(*b*) ·20 instead of ·13 P_2O_5

Page 93.—*Females*—

Muscle—(*b*).

	Proteid.	Fat.	P_2O_5
	34·97	19·09	1·03
instead of	52·45	28·64	1·55

Page 94.—Ovaries (*b*).

	Proteid.	Fat.
	8·46	1·02
instead of	9·82	1·00

Page 98.—Ratio of total Proteid of Muscles to total Proteid of Ovaries.

Oct. B.—9·1 : 1, instead of 7·1 : 1.
Nov. 6.—4·7 : 1, instead of 7·1 : 1.
Dec. 6.—3·3 : 1, instead of 2·9 : 1.
Dec. 13.—3·4 : 1, instead of 3·3 : 1.

Ratio of total Fat of Muscles to total Fat of Ovaries.

Oct. B.—36·9 : 1, instead of 28·4 : 1.
Nov. 6.—22·7 : 1, instead of 34 : 1.
Dec. 6.—3·3 : 1, instead of 3·48 : 1.

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* As will be readily seen on consultation of the tables in the earlier paper, these errata only refer to the quantities per average fish and not to the percentages.

III.—SOME ADDITIONAL NOTES ON COPEPODA FROM THE SCOTTISH SEAS.

By THOMAS SCOTT, LL.D., F.L.S., Mem. Soc. Zool. de France.

(Plates XIII.–XV.)

The descriptions of several of the new or rare Copepoda obtained during the investigations that have been carried out under the direction of the Fishery Board for Scotland, and published in the earlier Annual Reports of the Board, were for various reasons somewhat incomplete. In some cases only the female was available for description, the male being at the time unknown; while in others, where the species, though rare, was already established, only the fact of its occurrence in our seas was recorded and the description of it left to some future occasion.

In the remarks which follow I have, with the help of the drawings prepared for me by my son Andrew Scott, A.L.S., endeavoured to describe somewhat fully three curious forms obtained from different Scottish localities, where they have occurred in sufficient numbers to permit of a more accurate study of the peculiar characteristics by which they are distinguished than was possible at the time they were first recorded.

These species include the two Harpacticoida *Harrietella simulans*, T. Scott, and *Laophontodes typicus*, T. Scott, of which only the females have been previously recorded, together with a description of what appears to be the male and female of a remarkable species known as *Notopterophorus papilio*, Hesse, found as a commensal in the branchial chamber of large Ascidians.

Descriptions are also given of two Copepod parasites of fishes which do not appear to have been previously recorded, and which belong to a somewhat aberrant genus of the Caligoida, viz., *Nogagus*.

These different forms are described in the sequel in the order in which they are here referred to.

It may also be stated that the species mentioned above, though only now described, have been in my possession for several years, the publication of their description having been for various reasons delayed.

Division Harpacticoida, G. O. Sars.

Fam. Laophontidæ, G. O. Sars.

Genus *Harrietella*, T. Scott.

Harrietella simulans, T. Scott. Pl. xiii., figs. 1–5.

1894 (?) *Laophonte simulans*, T. Scott, Twelfth Annual Report of the Fishery Board for Scotland, Pt. III., p. 248. Pl. vii., figs. 24–32.

1906. *Harrietella simulans*, T. Scott., Ann. and Mag. Nat. Hist. Ser. 7, vol. xvii., p. 464, pl. xi., figs. 9 and 10.

The structure of *Harrietella simulans* is in some respects similar to that of *Laophonte*, Philippi, and, therefore, while differing considerably in one or two points, it was, when first discovered, ascribed, though with some doubt, to this genus, especially as only the females had at that time been noticed. The discovery of additional specimens allowed a more thorough examination to be made of the structure of the species, and it then became evident that its place in *Laophonte* was untenable, and this rendered its removal to another genus—*Harrietella*—necessary.

But while the female of this species has been known for a number of years, the male has apparently remained undescribed. I, therefore, in the following additional notes on the species, include a short description of the male form.

The species is a very small one, the female being scarcely half a millimetre in length, but the male is still smaller. It is a demersal form, and, like a number of other such forms, its distribution is somewhat restricted. I have rarely noticed *H. simulans* among the numerous bottom forms occasionally captured with the dredge, even at some of the more favourable collecting grounds in the Firths of Forth and Clyde; yet when a piece of decaying wood, the surface of which is perforated by boring molluscs or crustaceans, is brought up in the dredge or trawl net, numerous examples of this particular Copepod may be obtained living apparently in the crevices of the wood. When the pieces of decaying wood are carefully removed from amongst the other debris and washed in a bottle containing methylated spirits, and the sediment examined under a hand lens, quite a number of little animals may sometimes be obtained.

In *Laophonte* the body is usually of a narrow, oblong form, but in *Harrietella* it is broadly ovate and considerably depressed; and while in *Laophonte* the female carries only one ovisac, there are two in *Harrietella*. In the structure of the mouth appendages—the mandibles, maxillæ, and maxillipeds—there is a fairly close resemblance between the two genera, and the same may be said concerning the two pairs of antennæ and the first pair of thoracic feet. The second and third pairs in both the male and female, and especially in the male, though in their general structure somewhat resembling those of *Laophonte*, they are distinctly more robust. In both pairs the inner branch is composed of two sub-equal joints, the first being rather shorter than the other. In the male, the inner branch of the second and third pairs, which does not reach the end of the second joint of the outer branch, is furnished with two apical setæ. The outer branch is elongated and stout, and composed of three joints of nearly equal length; the first and second are each provided with a single moderately-long spine on the outer margin, and the third joint, which is furnished with a similar spine on the outer edge, bears also three strong terminal spines (fig. 3 represents one of the second pair of feet). The fourth pair in the male resembles that of the female in having the inner branch short, narrow, and uni-articulated, and provided with two short apical setæ; but while the outer branch in the female is two-jointed, that of the male consists of three joints, the first two being each provided with a moderately long and stout plumose seta on the outer margin, and the third with four similar setæ round the distal extremity. The outer branch of the fourth pair in the male, like the same pair in the female, is remarkably stout (fig. 4).

The fifth pair in the male consists of an oblong basal joint, provided with a spiniform seta on the inner distal angle and a setiferous appendage on the outer, and a small one-jointed branch bearing a few plumose bristles (fig. 5).

In the male, the last two segments of the metasome, though nearly uniform in width with those of the urosome, are distinctly narrower than the preceding segments, and in this respect there is a marked difference between the two sexes when seen from above.

In the female the width of the posterior segments decreases gradually instead of abruptly.

The antennules of the male are modified to form powerful grasping organs, as shown in the drawing (fig. 2).

The distribution of this curious species appears to be local rather than rare, and since its discovery in the crevices of decaying fragments of wood, its occurrence in similar situations has occasionally been noticed both in the Firth of Forth and the Firth of Clyde, and it may probably be found in such situations round other parts of our shores.

Genus *Laophontodes*, T. Scott.

Laophontodes typicus, T. Scott. Pl. xiii., figs. 6–15.

> 1894. *Laophontodes typicus*, T. Scott, Twelfth Annual Report of the Fishery Board for Scotland, Pt. III., p. 249, Pl. viii., figs. 2–8.

It is thirteen years since a description of this species was first published in the Board's Twelfth Annual Report. The description was prepared from female specimens, the male being at that time unknown; and as, so far as I know, it has not yet been recorded, the following observations on its structure, with some additional remarks on the female, will render the former description more complete.

This species, like the last, is very small, the largest of our female specimens is scarcely ·5 millimetre (about $\frac{1}{50}$ of an inch) in length, while the males are only about one-sixtieth of an inch; they may therefore be easily overlooked.

In both the male and female the body is elongated and narrow, and is considerably depressed (fig. 6). The male, though smaller than the female, does not differ much from it in general appearance.

The anterior antennæ in the male are composed of the same number of articulations as those of the female, but the last three joints are considerably modified, as shown in the drawing (fig. 7). The third joint is small, the next is dilated and gibbous, while the last forms a slender hook-like process.

The mandibles are very small, and the biting-edge is armed with a few prominent teeth. The mandible-palp consists of a single small one-jointed branch bearing several setæ (fig. 8).

The maxillæ are similar to the same organs in typical species of *Laophonte*, and consist of a broad masticatory lobe provided with several elongated slender spines, and a small bilobed palp (fig. 9).

The first maxillipeds are small but moderately stout, and the basal joint, which is somewhat dilated, is provided with a small setiferous process on the inner margin, while the end joint terminates in an elongated and moderately strong claw (fig. 10). The second maxillipeds are as previously described.

The first pair of thoracic feet are in structure nearly as in *Laophonte*, the inner branch being short and three-jointed, while the outer, which is two-jointed, is stout and furnished with a strong terminal claw (fig. 11). The second pair, like the first, is somewhat similar in the two sexes; the outer branch is slender and elongated and composed of three sub-equal joints, while the inner is short and two-jointed; the first joint of the inner branch is extremely small, but the second, though very slender, is of moderate length and furnished with two slender apical setæ. The third pair in the female is similar in structure and armature to the second, but the inner branch of this pair in the male has two peculiar and moderately stout terminal appendages, one of which forms a short hook-like process, while the other is straight and terminates in two slender setæ of unequal length (fig. 12).

The structure of the fourth pair appears to be similar in the two sexes; the outer branch is moderately slender and elongated, and composed of three sub-equal joints armed with long spiniform setæ on the outer margin; the inner branch is very short and two-jointed, the first joint being extremely small, while the second is slender and moderately elongated, and furnished with three small terminal setæ (fig. 13).

The fifth pair in the female consists of a small basal joint to which is articulated a narrow elongated plate about four times longer than broad, and provided with a number of setæ arranged as shown in the drawing (fig. 14). In the male the fifth pair is similar to those of the female, but smaller and less spiniferous (fig. 15).

The furcal joints in both the male and female are elongated and slender and set widely apart; they are each furnished with a long and stiff apical bristle and a few small hairs (see fig. 6).

I have obtained this species in the same situations with the *Harrietella* previously mentioned, but it seems to be a rarer form, and males especially appear to be very scarce.

Notodelphyoida, G. O. Sars.

Fam. *Doropygidæ.*

Genus *Notopterophorus*, Costa.

Notopterophorus papilio, Hesse. Pl. xiv., figs. 1–19.

> 1865. *Notopterophorus papilio*, Hesse. Observations sur des Crustacés rares ou nouveaux des côtes de France, *Ann. des Sci. Nat.*, 5th Sér. zool., vol. i., p. 338, pl. xi., figs. 1–13.
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> 1878. *Notopterophorus papilio*, G. S. Brady. A Monograph of the Free and Semi-parasitic Copepoda of the British Islands (*The Ray Society*), vol. i., p. 142, pl. xxxi., figs. 3-12.

The Entomostracan to which M. Hesse has given the name mentioned above is one of the most remarkable among a strange group of species found living as "unbidden guests" within the branchial chamber and sometimes in the alimentary canal of various simple and compound Ascidians.

The distinguishing characteristic of *Notopterophorus* is, as the name implies, the peculiar wing-like appendages of the cephalo-thorax, which give to the creature its somewhat grotesque appearance. These appendages, which are situated on the dorsal aspect, appear to be six in number, and assume the form of very thin and almost transparent plates, each of which terminates in long, slender, whip-like filaments. The frontal plate, which is obscurely triangular, has a hood-like structure, and appears to be furnished with three filaments—one central and one at each of the lateral extremities; this plate seems to be an expansion of the first thoracic segment. The next four plates occur in pairs; the first pair spring from the second segment of the thorax, and the following pair from the third segment, and each single plate bears two whip-like filaments. The posterior plate, which is of one piece, moderately large and broadly triangular, and which springs from near the distal end of the last segment of the thorax, is apparently provided with three slender processes; two of them are prolongations of the lateral angles, and the other of the intermediate angle by which the posterior edge of the plate is divided into two sub-equal portions. It has to be noted, however, that these dorsal expansions are so extremely delicate that, though many specimens have been examined, it was rare to find one with the appendages uninjured. The following is M. Hesse's description of the posterior dorsal plate:—"Enfin la sixième expansion membraneuse que est aussi triangulaire comme celle placée sur l'occiput, est fixée un peu audessus de la base de l'abdomen qu il recouvre, et semble destiné à protéger les oeufs ou les embryons. Son bord inférieur présente deux découpares, terminées per trois lanières, dont l'une est au milieu et les deux autres à l'extrémite du bord inférieur."

The cephalo-thorax in the female is comparatively large, and consists of five segments; in adult specimens, however, the segments are not very clearly defined. The first four do not differ much in size, but that which forms the head or *cephalosome* is rather smaller than the others. The last segment is fully twice the length of the preceding one, and is composed of two coalescent segments—the fourth and fifth segments of the *metasome.* This double segment is destined, as in other members of the *Notodelphyoida*, to be a receptacle for the eggs and developing larvæ, and when packed with eggs or larvæ it becomes considerably enlarged, and is also more highly coloured than other parts of the animal. (See fig. 1.)

In the female the abdomen—*urosome*—is moderately elongated, slender, and cylindrical, and is composed of five segments, but the prefurcal segment is very small and of a peculiar structure, and seems to overlap the base of the short furcal joints. These joints, which are somewhat arcuate, are each armed with about four very short but strong curved spines (fig. 19).

Neither the male nor the young female appears to be furnished with the prominent dorsal appendages possessed by the female that has reached the ovigerous stage. Figure 3 represents a young female with an adult male adhering to its dorsal surface, in both of which the wing-like expansions are wanting. The female appears to have reached the stage when these expansions are beginning to be developed, but in the male no trace of them can be observed, though its structure shows it to be a mature example.

In the specimens under consideration the antennules (anterior antennæ) are in both sexes apparently nine-jointed. In those of the female the first two joints are of large size, but the remaining joints are considerably shorter and narrower, and the second and third from the end are smaller than any of the others. The male antennules are moderately stout and taper gradually towards the distal extremity; the first two joints are not so dilated as the first two in the female, but the remaining seven joints are rather larger. (See figs. 4 and 5.)

The antennæ (posterior antennæ) of the male, though considerably smaller than those of the female, are similarly armed with strong terminal claws, as shown in figs. 6 and 7.

The mandibles are well developed and possess a broad, biting edge, armed with several irregular teeth; the mandible-palp is moderately large and two-branched; the proximal branch appears to be uni-articulate, but the other is two-jointed; both branches bear plumose setæ (fig. 8).

The maxillæ (fig. 9) are also moderately developed and supplied with numerous plumose setæ.

The first maxillipeds have the basal part greatly enlarged and provided with a number of long plumose setæ on its inner margin; the second joint bears a long stout and curved spine; the end joint is narrow, about twice longer than broad, and furnished with a few terminal setæ (fig. 10).

The second maxillipeds are moderately stout and elongated; they are also apparently three-jointed, and bear a number of plumose setæ, as shown in the drawing (fig. 11).

All the thoracic feet, both in the male and female, are short and moderately stout, and the general structure of the first three pairs is somewhat similar in the two sexes, though they differ somewhat in the armature and in one or two other minor details.

In the first pair the inner branches are composed of two and the outer of three joints; there is not much difference in the length of the two branches. The second joint of the inner branch is rather longer than the first, while the middle joint of the outer branch is much smaller than either the first or the third joints. Both branches are similarly armed in the two sexes. The outer are furnished with several stout spines on the exterior margin and apex, and with a short plumose setæ on the inner margin. The inner branches are provided with a number of plumose setæ, especially on the inner edge, but those on the inner branches of the female are more elongated. There is also a stout sigmoid spine on the inner aspect of the second basal joint in the female first pair, which appears to be wanting in that of the male. (See figs. 12 and 13.)

The second pair in both sexes have the inner and outer branches three-jointed. In that of the female the inner branch is rather shorter than the outer; the first joint bears one setæ, the second two, and the third two on the inner margin; the third joint has also three apical setæ and another on the middle of the outer margin. All these setæ are elongated and plumose. The outer branch has the proximal joint moderately stout and as long as the next two joints taken together: it bears a single seta on the inner edge and a short spine on the outer distal angle; the second joint, which is smaller than the first or third, also bears a short marginal spine, while the third joint has two spines on the outer margin and two at the apex.

In the male the length of the outer and inner branches of the second pair is about the same; the armature of the inner margin of the inner branch is similar to that of the second pair in the female, but the end joint bears two terminal spines instead of setæ, with another spine on its outer margin; the armature of the outer branch in the male does not differ much from that of the same branch in the female, except that the marginal spines are rather longer. (See figs. 14 and 15.)

The third pair, as in the second just described, have in the two sexes both branches three-jointed. In the male the third pair scarcely differs from the second either in structure or armature. In the female the third pair is rather smaller than the second, but the inner branch carries the same number of plumose setæ, while the outer branch, though armed with the same number of marginal spines as that of the second, wants the seta on the inner margin of the first joint (fig. 16).

The fourth pair in the female is almost the same in structure and armature as the third pair; but in the male the fourth pair is very small, and though the outer branch consists of three joints, the inner is only two-jointed and distinctly shorter than the outer; both branches are provided with moderately stout spines (fig. 17).

The fifth pair consists of a narrow, elongated, one-jointed branch, which is articulated to a rudimentary basal joint and furnished with two slender apical spines (fig. 18). The female represented by the drawing (fig. 1) is about 4·5 millimetres in length.

Remarks.—The *Notopterophorus* described in the preceding notes, though it does not conform altogether to Hesse's description of *Notopterophorus papilio,* agrees with it in several important particulars, and I am therefore inclined to ascribe it to that species. Moreover, the mouth appendages described and figured here are apparently identical with those of the form recognised as belonging to Hesse's species in Dr. Brady's "Monograph of the Free and Semi-parasitic Copepoda of the British Islands," vol. 1., p. 142, plate xxxi., figs. 3–12.

The two habitus figures given in M. Hesse's original work and reproduced in the Monograph referred to are, in respect of the slender form of the cephalo-thorax, unlike any of the specimens I have examined. On the other hand, Hesse's description of the cephalo-thorax and abdomen agrees tolerably well with Scottish specimens of the adult female.*

Another point of interest which is noticed by Dr. Brady is the great similarity between this species and the members of another genus, and in referring to this he says that "except for the peculiar wing-like dorsal appendages there seems to be little to separate this genus from *Doropygus,*" and this corresponds with the opinions of other observers, and is also supported by the *Doropygus*-like form of the young female, and still more by the general character of the male. Still, the presence in the adult female of these remarkable appendages is in itself, I think, a sufficient reason for separating this and similar forms under the distinctive name established by Costa and utilised by M. Hesse.

The purpose which these curious and wing-like expansions serve in the life-history of the creature may be, as M. Hesse suggests, to assist its movements "or to aid in removing obstacles from its path." I am inclined, however, to agree with Dr. Brady, who says—"For my own part I find it difficult to believe that these excessively delicate organs can be of much use for such purposes, or to understand why, if they are so used, they should be entirely wanting in so many other species which live under the same conditions. We must, I think, admit that their use is at present quite unknown."†

I have obtained this Copepod in large Ascidians from various Scottish localities, but nowhere so common as in Ascidians dredged in Scapa Flow, Orkney. The branchial chamber of the large Ascidians dredged there was sometimes crowded with these Copepods.

Though many specimens have been examined by me from Scottish waters, they were apparently all of the one species, but examples were obtained in different stages of development, from the young females without dorsal appendages, or with a mere indication of them, to those that were adult and whose dorsum was ornamented with the appendages fully expanded.

In full-grown specimens the ovigerous sac was usually so distended, and the integument so thin and transparent, that through it the eggs or larvæ could be seen crowded together. Occasionally examples were observed with the ovigerous sac empty and collapsed, its contents having been set free.

Herr R. Buchholz has described what appears to be a different species from that of M. Hesse under the name of *Notopterophorus elongatus,*‡ which is also referred to by Dr. Giesbrecht in his remarks on the

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* Referring to this part of the animal, Hesse says:—"Le thorax est gros et court; il se divise en cinq articles à peu près de la même grandeur, sauf pourtant le dernier que est le double des autres, et que acquiert encore un volume plus considérable à mesure qu'il se remplit d'œufs, et que ceux-ci se développement par l'incubation."

† Brady, *op. cit.*, p. 144.

‡ "Beiträge zur Kenntniss der innerhalb der Ascidien lebenden parasitischen Crustaceen des Mittelmeeres." *Zeitschr. Wiss. Zool.*, Band 19, p. 127, taf. viii., fig. 6, and taf. ix., fig. 6 (1869).

Notodelphyidæ* ; while Dr. Canu, referring to the distribution of this species, speaks of it as occurring in the Mediterranean, the English Channel (Manche), and the North Sea.† Dr. G. S. Brady records the occurrence of one or two specimens of *Notopterophorus elongatus* amongst some things sent to him by the Rev. A. M. Norman, but which were lost during examination and before they were described and figured.‡ Possibly the form described here should be referred to the same species, and ultimately this may be necessary. Meantime, however, I am inclined to identify it with the form described by M. Hesse.

In the figure of *Notopterophorus elongatus* given by Dr. Bucholz (fig. 6A, pl. viii.) in the work referred to in the footnote, the dorsal appendages are without whip-like filaments; and the excellent drawings of the same form in plate xxiii. of Dr. Giesbrecht's *Beiträge* represent these appendages as bearing minute hairs instead of the long filaments seen in *N. papilio.*

Tribe Caligoida.

Fam. Caligidæ.

Genus *Nogagus*, Leach (1819).

Nogagus latus, sp. n. Pl. xv., figs. 1–9 (♂).

This species and the one to be immediately described are both males, and are for the present referred to the genus *Nogagus*, Leach ; they were observed on dog-fishes captured in the North Sea.

The genus *Nogagus* is not a satisfactory one, and though meantime allowed to stand, is not considered valid. The various forms that have been included in this genus are all of them males, and are supposed to belong to other genera, of which the females only are known, *i.e.*, *Pandarus*, Leach, *Dinemoura*, Baird, *Echthrogaleus*, Stp. and Lüthk, etc., and a few of them have already turned out to be the males of such genera.

The males and females of those species that have already been satisfactorily identified—as, for example, *Pandarus carchariæ*, Leach (the female), and *Nogagus Cranchi*, Van Beneden (the male)—are so unlike each other, not only in general appearance, but also to some extent in structure, that it is difficult to believe, without having sufficient proof of their identity, that they can belong to the same species. Yet it seems to be the case, in these examples at least, that the difference between them, though so pronounced, is only sexual, and due probably to a difference in the habits of the animals, the male perhaps living a more free life than the female.

Steenstrup and Lütken divided the *Nagagi* into two groups, the chief differences between them being that in the first the urosome (abdomen) and both branches of the first four pairs of thoracic feet consist of two articulations, while in the second the urosome and both branches of the fourth pair of feet are uni-articulate.

One of the forms now to be described—the one named above—appears to be referrable to the first group, but the other differs slightly from both.

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* "Beiträge zur Kenntniss einiger Notodelphyiden." *Mitth. Zool., Stat. Neapel*, 3 Band, pp. 327, 328, taf. xxii.-xxiv. (1882).

† "Les Copépodes du Boulonnais." *Trav. du Laborat. de Zool. Mar. des Wimereux-Ambleteuse (Pas-de-Calais)*, Tome vi., p. 191 (1892).

‡ "British Copepoda," vol. i., p. 144.

This form—*Nogagus latus*—has a close general resemblance to *Caligus*, except that the frontal plates are without *lunulæ.* The cephalic shield is sub-rotundate, being nearly as broad as it is long, and it is also nearly equal to two-thirds of the entire length of the animal. The fourth and fifth thoracic segments are short but of moderate width ; the last is about twice the length of the preceding segment and is sub-quadrate in outline. The urosome is small and appears to be composed of two segments. The furcal joints are also short and broad, while the apical setæ have the appearance of small lamelliform plates fringed with delicate hairs (fig. 1).

The antennules are moderately stout, and the first joint is furnished with a number of short and stout plumose bristles round the distal end, but the second joint is smaller and bears a few apical spines (fig. 2).

The second antennules are also stout, and they are each armed with a strong terminal claw (fig. 3).

The first pair of maxillipeds are considerably elongated and resemble nearly the same appendages in *Nogagus borealis*, Stp. and Ltk. (fig. 4).

The second maxillipeds are short and very robust, their distal end is moderately truncate, and they are each armed with a short but strong terminal claw (fig. 5).

The first pair of thoracic feet have both branches short, sub-equal, and two-jointed; each branch is provided with three stout and moderately elongated terminal setæ, the outer branch having also a few short spines on the exterior margin, as shown in the drawing (fig. 6).

The second pair is rather more robust than the first, both branches being two-jointed and of nearly equal length. The first joint of the inner branch has one plumose seta on the inner margin, while the second bears seven or eight similar setæ round its distal end. The first joint of the outer branch is also furnished with a seta on the inner margin and a small spine on the outer distal angle, but the end joint carries five setæ round the inner margin and apex and four spines on the exterior edge (fig. 7).

The third pair, which, like the first and second, has both branches bi-articulated, is also moderately stout, but the branches, though armed nearly as in the second pair, are rather shorter (fig. 8).

The structure of the fourth pair is similar to that of the other three, but this pair is rather smaller, and both branches are very short. One seta springs from the inner distal angle of the first joint of the inner branch, while the second joint carries three or four round the distal end. The first joint of the outer branch is provided with a small spine exteriorly, while the end joint has five setæ round the inner margin and apex, and three or four small spines on the outer margin (fig. 9).

Habitat.—On piked dog-fish (*Squalus acanthius*) captured in the North Sea in 1902.

Nogagus ambiguus, sp. n. Pl. xv., figs. 10–17 (♂)

In this species the cephalic shield is of an oval outline, and the lateral margins where they meet anteriorly form a more or less distinctly angular instead of a broadly rounded front, as in the form just described. The last two thoracic segments are of nearly equal size, and their width is about one-third of that of the cephalic shield at its widest part. The urosome (abdomen) consists of one small segment, and the furcal joints, which are also very short, are each furnished with moderately long plumose setæ (fig. 10).

The antennules, which are of average size, are also adorned with long plumose setæ (fig. 11).

The first maxillipeds are elongated, and each is armed with a long and powerful terminal claw having a stout seta at its base nearly as in *Nogagus lunatus*, Stp. and Ltk.—a species which this form resembles in some other particulars (fig. 12).

The second maxillipeds are short and very stout, and armed with strong terminal claws as shown in the drawing (fig. 13).

The first four pairs of thoracic feet are composed of two sub-equal branches, and both branches in each of the first three pairs are distinctly two-jointed. In the first pair the end joints carry three long plumose setæ, the end joints of the outer branches being also provided with four spines on the exterior margin (fig. 14).

The second pair are nearly similar in structure and armature to the second pair in *Nogagus latus* (fig. 15).

The third pair also resembles the same pair in that species, but the spines on the exterior edge of the outer branch are rather stronger, and the second joints of both branches are provided with only four elongated though stout terminal setæ (fig. 16).

The fourth pair are rather small, and the inner branch is bi-articulate; a seta springs from the inner distal angle of the first joint, and the second carries three terminal setæ. The outer branch, which appears to consist of two coalescent joints, with the articulation between them obsolete or nearly so, bears three setæ round the inner distal margin, and four spines—three small and one moderately large—on the exterior edge; the setæ are all elongated and plumose (fig. 17).

Habitat.—Taken from a piked dog-fish (*Squalus acanthius*) captured in the North Sea in 1902.

Genus *Dinemoura*, Latreille (1829).

Dinemoura producta (O. F. Müller). Pl. xv., figs. 18–20 (♀).

This species was recorded in Part III. of the *Eighteenth Annual Report of the Fishery Board of Scotland*, and I now supplement the previous description by the following additional note:—The antennules, as shown by the drawing (fig. 18), resemble in their armature those of *Nogagus latus* just described. The first pair of thoracic feet are of a peculiar structure; the inner branch is small, and it and the second basal joint bear a few small rounded wart-like processes. The outer branch has the first joint expanded and gibbous at the proximal end exteriorly, while the distal end is produced so as to extend partly over the small rounded second joint. Both branches are furnished with three marginal or sub-terminal arcuate setæ fig. (19).

The second pair, which is also slightly distorted, has both branches three-jointed and of about equal length. The drawing (fig. 20) shows the structure and armature of this pair.

This species has been obtained occasionally on Porbeagle sharks landed at the Aberdeen Fish-market.

Another species usually found on the Porbeagle shark, viz., *Echthrogaleus coleoptratus*, has also been obtained adhering to the dorsal fin of a piked dog-fish that was captured in the Moray Firth in October, 1900. I do not know of any previous record of *Echthrogaleus* from this fish.

EXPLANATION OF THE PLATES.

PLATE XIII.

Harrietella simulans, T. Scott.

		Diam.
Fig. 1.	Male, dorsal view,	× 260
Fig. 2.	Antennule of male,	× 546
Fig. 3.	Foot of second pair, male,	× 546
Fig. 4.	Foot of fourth pair, female,	× 820
Fig. 5.	Foot of fourth pair, male,	× 820

Laophontodes typicus, T. Scott.

Fig. 6.	Female, dorsal view,	× 260
Fig. 7.	Antennule of male,	× 520
Fig. 8.	Mandible and palp,	× 780
Fig. 9.	Maxilla,	× 780
Fig. 10.	First maxilliped,	× 780
Fig. 11.	Foot of first pair, male and female,	× 820
Fig. 12.	Foot of third pair, male,	× 546
Fig. 13.	Foot of fourth pair, male and female,	× 546
Fig. 14.	Foot of fifth pair, female,	× 542
Fig. 15.	Foot of fifth pair, male,	× 546

PLATE XIV.

Notopterophorus (c) *papilio*, M. Hesse.

Fig. 1.	Female, side view,	× 20
Fig. 2.	The same, dorsal view,	× 20
Fig. 3.	Young female with a male adhering to it,	× 47
Fig. 4.	Antennule of female,	× 410
Fig. 5.	Antennule of male,	× 410
Fig. 6.	Antenna of female,	× 205
Fig. 7.	Antenna of male,	× 410
Fig. 8.	Mandible and palp,	× 123
Fig. 9.	Maxilla,	× 205
Fig. 10.	First maxilliped,	× 205
Fig. 11.	Second maxilliped,	× 137
Fig. 12.	Foot of first pair, female,	× 71
Fig. 13.	Foot of first pair, male,	× 270
Fig. 14.	Foot of second pair, female,	× 72
Fig. 15.	Foot of second pair, male,	× 270
Fig. 16.	Foot of third pair, female,	× 72
Fig. 17.	Foot of fourth pair, male,	× 456
Fig. 18.	Foot of fifth pair, female,	× 340
Fig. 19.	One of the furcal joints,	× 270

PLATE XV.

Nogagus latus, sp. n.

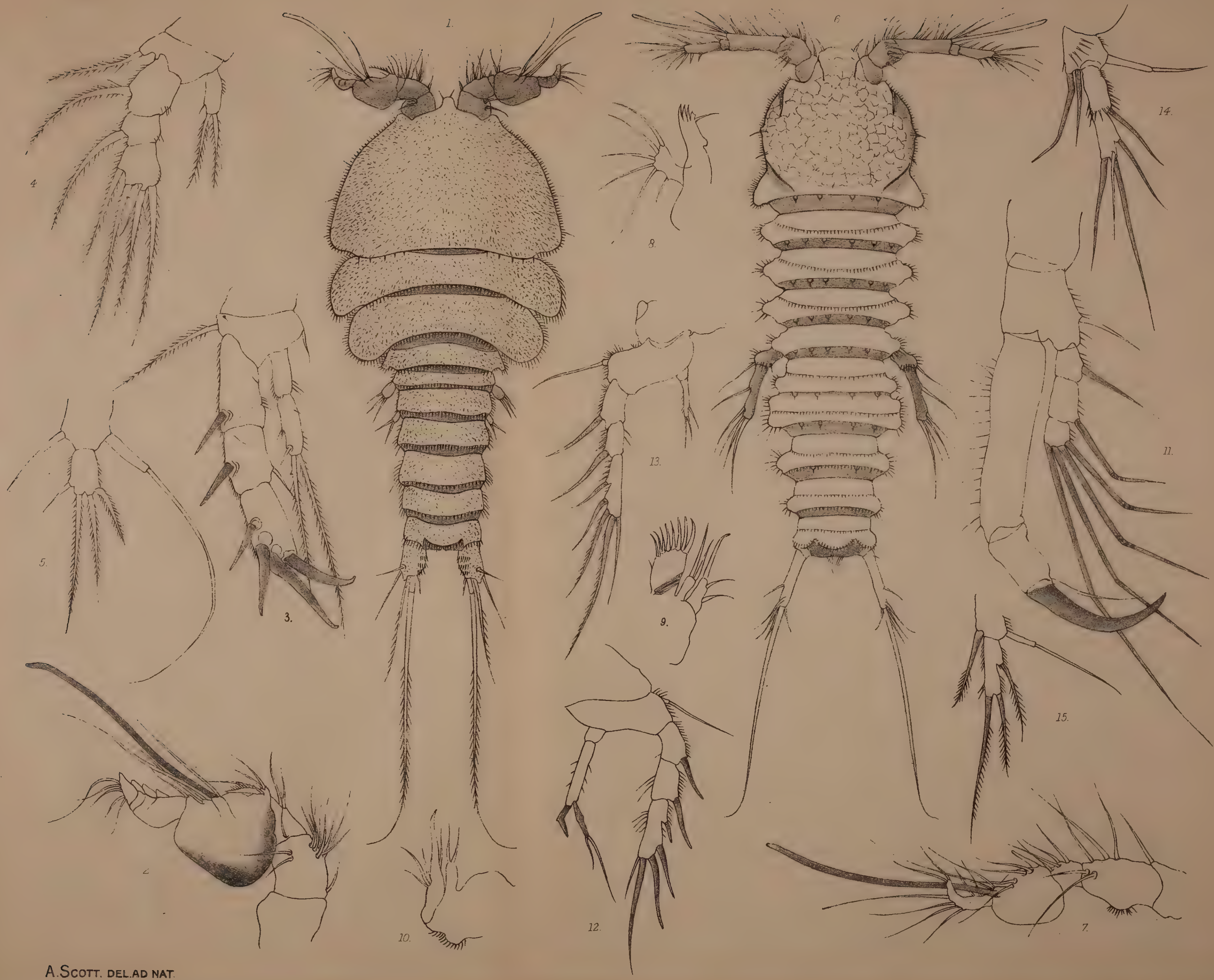
Fig. 1.	Male, dorsal view,	× 20
Fig. 2.	Antennule of the same,	× 120
Fig. 3.	Antenna,	× 90
Fig. 4.	First maxilliped,	× 90
Fig. 5.	Second maxilliped,	× 60
Fig. 6.	Foot of first pair,	× 90
Fig. 7.	Foot of second pair,	× 60
Fig. 8.	Foot ot third pair,	× 45
Fig. 9.	Foot of fourth pair,	× 20

Nogagus ambiguus, sp. n.

		Diam.
Fig. 10.	Male, dorsal view,	× 20
Fig. 11.	Antennule of the same,	× 90
Fig. 12.	First maxilliped,	× 90
Fig. 13.	Second maxilliped,	× 60
Fig. 14.	Foot of first pair,	× 45
Fig. 15.	Foot of second pair,	× 30
Fig. 16.	Foot of third pair,	× 45
Fig. 17.	Foot of fourth pair,	× 45

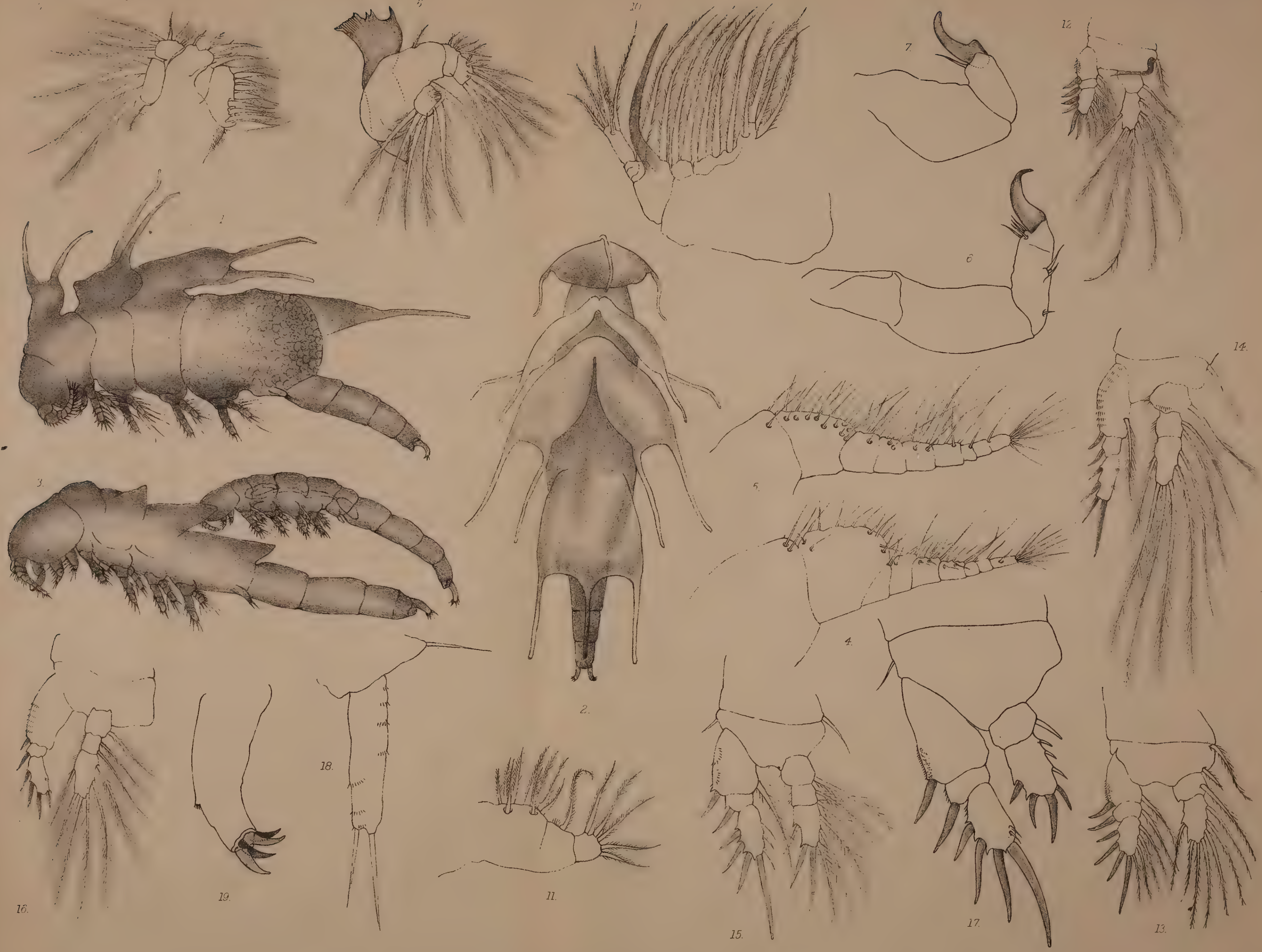
Dinemoura producta (O. F. Müller).

Fig. 18.	Antennule of female,	× 40
Fig. 19.	Foot of first pair of same,	× 26
Fig. 20.	Foot of second pair,	× 13



A. SCOTT. DEL. AD NAT.

PLATE XIV



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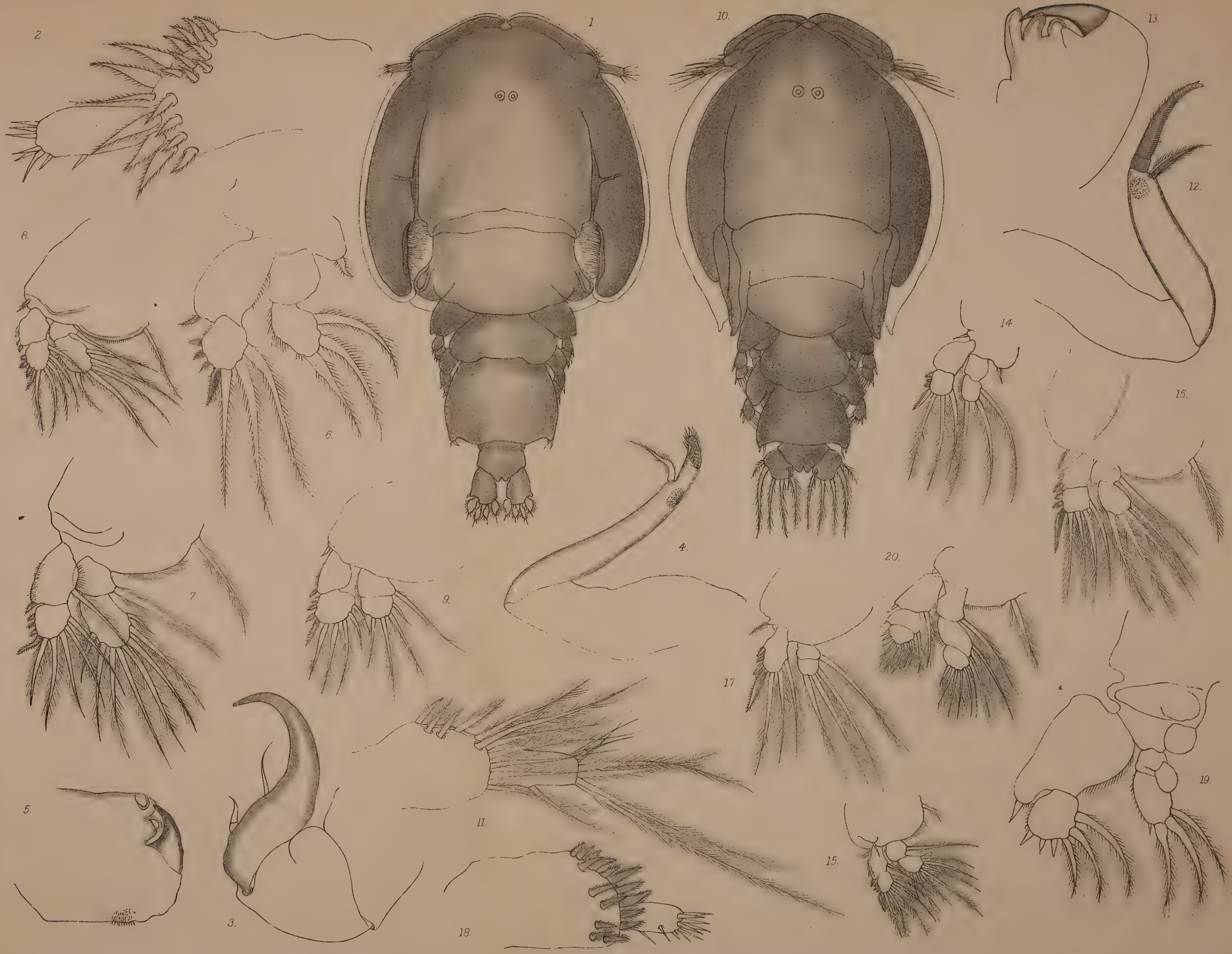
Notopterophorus papilio Hesse.



A. Scott. del. ad nat.

Figs. 1–9. Nogagus latus, sp. n. Figs. 10–17, Nogagus ambiguus, sp. n. Figs. 18–20, Dinemoura producta. O. F. Müller.

IV.—THE SPAWNING, GROWTH, AND MOVEMENT OF THE MUSSEL (*MYTILUS EDULIS, L.*), HORSE-MUSSEL (*MODIOLUS MODIOLUS, L.*) AND THE SPOUTFISH (*SOLEN SILIQUA, L.*)

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(Plates XVI.–XX.)

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During the past three years I have carried on certain experiments bearing on the natural history of the Mussel, and the results are embodied in the following pages.

There is an extensive literature on the mussel and its culture, and, notwithstanding that fact, there are various points in its life-history which require further elucidation. While the development has been studied by several authors, especially by Wilson, there are still blanks in the early life-history. And many of the causes which influence the well-being of the mussel in different localities are not clearly defined.

The facts which I am able to communicate extend our knowledge of the spawning, growth, and movement of the shell-fish.

I shall first of all discuss the development of the reproductive organs, and the appearance of the mussel in different months of the year.

The Development of the Reproductive Organs.

In the quiescent period, according to Wilson, the mantle lobes are delicate and transparent. "The follicles are racemose outgrowths of the minor genital canals, . . . and they may be observed pushing their way in the mantle until they reach nearly to the pallial muscle. With a little experience it is possible to detect the sex of the specimen, the darker orange tinge and the less distinctly botryoidal arrangement of the female, as contrasted with the male glands, being usually marked. The colour may be almost absent in comparatively young forms of both sexes. The genital ducts lie mostly toward the outer side of the mantle. Where the branches enter the follicle they may have ciliated columnar epithelium on the one side and germinal epithelium on the other. The genital tube is one of two common ducts which pass to the outside."

The mussels examined in the Laboratory have been obtained from two sources mainly, viz., from Mr. Allan, mussel merchant, Torry, and from the sides of the pond at the Bay of Nigg. The description of the mussels may be conveniently taken under the denomination of the month, and, beginning with September, that arrangement will be followed.

September.—The mussels obtained from the side of the pond were fat, and had in the majority of cases yellow-coloured mantles. This colour appears to be due to fat. One or two had thin dark-orange mantles; they are probably spent, or mussels that had not yet fattened.

From a lot supplied by the merchant, two fat mussels were examined. In one the mantle was cream-coloured; in the other it was much paler. Under the microscope very small spherical corpuscles were seen along with broken ground tissue. One or two of the corpuscles had a slight motion.

November 19, 1906.—Some mussels measuring up to 1⅞ inches in length were obtained from the walls of the upper reservoir tank. They were in poor condition, with translucent mantles. The two sexes were distinguished with difficulty. Two different classes were noted—one in which the mantle and the abdomen were of a yellow colour; the other in which the same parts are slightly orange-coloured. Brown veinings are seen in the mantle of the latter. These brown veins are lined with cilia, in parts at least, and are filled with brown corpuscles, which, varying in size, debouch from the cut ends of the canals. There are also in the tissue of the mantle little colourless ovoid bodies which, under a high power, are seen to consist of several cells enclosed in an envelope. Under medium and low powers the groups are egg-like. In the other mussel the canals are, by reflected light, of a light yellow colour; by transmitted light they are dark. They are wide, and packed with small round cells. When pressed out of the canal they are accompanied by small oscillating corpuscles. There are numbers of small cells between the canals differently arranged from the former mussel.

November 27, 1906.—Mussels were obtained from the big pond. They are fat, and show various conditions. Some of them had white mantles. These, certain local fishermen considered to be better for bait than the yellow mantle. They regard the yellow mantle as indicating spawning.

There were mussels showing mantles of intermediate shades of colouring between the white and deep yellow or cream. The white and light cream mantles have colourless veining. Others, dark cream in colour, have brown veinings and amber spots. In one large mussel the mantle was of a light cream-colour, with amber-coloured veins, and it had its surface mottled with amber. The amber colour is due to minute amber-coloured cells of various sizes, some of them being fairly large oval cells with nuclei. There is also present a great quantity of refractive corpuscles. In the case of the deep-cream mantle, the ground is white with an amber mottling developed over it. In the light-cream mantle the brown cells are absent, but clear cells containing what resemble the heads of sperms were observed. The veining and mottling are rather colourless.

November 19, 1906.—The mussels supplied were principally fat, with heavy thick mantle, white or yellow in colour. Some small mussels had pale thin mantles coloured brown, showing brown veinings with little brown corpuscles. The white mantle when teazed out showed clear round cells with large nucleus and pitcher-like cells crowded with small refractive corpuscles mixed with small fat corpuscles. Great numbers of small refractive corpuscles were free. The veins were colourless. A second mussel had a cream-coloured mantle. It had brown veins, and was crowded with minute corpuscles which looked like the heads of sperms.

DECEMBER 15, 1906.—The mussels supplied by the merchant were of two distinct colours, viz., (1) light cream mantle, and (2) dark cream, inclining to orange. In the first class, on teazing a portion a white fluid is obtained that coagulates on the addition of fresh-water. The mantle consists of a very slight stringy tissue; hardly any basement or groundwork tissue is made out. The principal constituent is very minute oscillating corpuscles (fat) and pitcher-shaped cells full of larger corpuscles. Some round cells with large nucleus and nucleolus were also noticed. In one or two of the main vessels little brown patches were seen.

In the second lot a slight milkiness, due to fatty corpuscles, was obtained on teazing a portion of the mantle. Pouches were made out, with large dividing cells, and also some bodies apparently glandular, showing a central cavity and a great number of minute cells.

JANUARY 21, 1907.—On this date the mussels supplied to the Laboratory were separated into two classes by the colour of the mantles—(1) a cream-coloured mantle, and (2), an orange-coloured mantle. There are others which have a pink-cream hue. Some have thin orange-coloured mantles. In large specimens the orange-coloured mantles are thick, and show traces of a creamy-coloured base.

On cutting into the creamy-white mantle a pale white fluid issues Under the microscope it is seen to consist of ruptured thin-walled capsules, and there are also minute bead-like corpuscles and oil corpuscles.

In the orange mantle there are little brown cells of various sizes mostly minute. They show a nucleus.

The mantle of a small mussel was full of brown capsules filled with brown corpuscles of various sizes, and also of colourless corpuscles. The brown corpuscles are in most cases very small; some larger were seen to be dividing. The brown corpuscles are attached in little groups. There is a colourless connective tissue with long cells and an apparently albuminous blood-fluid. The capsules appear to be full of an albuminous corpusculated fluid, in which the brown corpuscles are growing.

In the large mussels the capsules are not so brown, but the brown corpuscles are dividing. There are also present colourless cells with nuclei.

FEBRUARY 27, 1907.—The mussels were now distinctly yellow (male) and red-coloured (female). The red colour was in various stages.

The male mussel was not very far advanced; the spermatophores contain round corpuscles, which oscillated very vigorously; they were of all sizes.

APRIL 11, 1907.—Some mussels that were shelled on the previous day were examined on this date. The cilia in some were still working.

The male had a pale mantle with the spermaries forming a prominent white granular layer on it. The paler part is seen to be divided up with pale-coloured spermaries, and these are sacs full of sperms, not quite so large as the white sacs. The white sacs are large and more widely separated from one another than are the egg-sacs in the female.

In some females the ground-work of the mantle is orange-coloured; the ovaries are white. The fringe of the mantle is distinctly orange-coloured, and shows brown bodies in vessels. In another female the mantle was not orange-coloured, but it had small closely-packed egg-cases and similar brown bodies. The eggs are quite white, pitcher-shaped, with a well-marked nucleus, possessing a nucleolus. The nucleus, as Wilson pointed out, appears to have a distinct cell-wall. The egg is oval and measures about 0·7mm in diameter; it is filled with yolk granules. The nucleus, according to M'Intosh, shows as a cleared part in the midst of the egg. In some cases it is burst clear out of the egg, and can be seen as a clear circular body with a prominent nucleolus. It measures 0·5mm. and less in diameter.

Seen alongside the mantle of the male, that of one female, with its ovisacs had a very slight cream colouration.

In the female the ovisacs were more equally developed, *inter se*, in contrast with the two distinct stages of development in the same mantle of the male. The latter fact will bear upon the question of the duration of the spawning period, and the possibility of the mussel spawning twice during the same season.

In one mussel which had a thin orange-coloured mantle, I was unable to make out definite sexual elements.

April 15, 1907.—Some mussels that were taken from the wall of the big pond had been kept in a sunk box.

On opening them they were found to be fat. The sexes were very distinct. The male had a deep cream-coloured mantle and abdomen. The female was of a chocolate-pink.

The sperm-sacs were distinct—white. The vessels in the mantle were translucent—amber. On cutting into the mantle a milky fluid issued. The sperms were alive, and, under Zeiss Obj. D.D. : oc. 4, showed fairly large.

In the female the ovisacs were only distinguished with difficulty in the general ground of the mantle. The vessels were similar to those in the male. On teasing the mantle the eggs were obtained, but in most cases they were burst. They were oval, round, or pear-shaped, measuring ·07-·1mm. in diameter. There is a large pore in the zona, and by it the yolk corpuscles pour out. The yolk granules wriggle about; they are smaller than the sperms. I was not able to make out any connection of the eggs to the ovarian tissue, even when they were sticking together *en masse*. The pore in the zona is a clean-cut hole. The pressure of the cover glass in some cases forces out the nucleus, although it is of greater diameter than the opening. In other cases the nucleus remains inside while the yolk granules nearly all pour out. The nucleus retains its shape after it issues from the pore. It exhibits a slight granular structure. Sometimes there are a few yolk granules attached to it. Occasionally the nucleus is accompanied by what appears to be a little nucleus.

The gills and labial palps in both sexes are sometimes orange-coloured; in the female rather darker than in the male. In the latter sex, however, they are also found colourless.

April 29, 1907.—The mussels supplied at this date were not apparently so far advanced as some already examined.

Some of them were fat and yellow in colour. On dissecting, a pale white fluid was got; it is albuminous, and coagulates on the slide when fresh water is added. It contained small round corpuscles, and cells full of dark refractive corpuscles.

The other mussels were pale and of a slight orange tinge, having thin mantles. In them were observed pitcher-shaped cells showing a clear nucleus. The eggs are not very far developed.

May 1, 1906.—The mussels on this date were nearly all pink. They were females with well-developed ova. The pink region is the mantle, which is almost wholly that colour.

May 31, 1907.—Some mussels were covered with barnacles. They were not fat. The mantles were thin, having a clear ground tissue, and reproductive organs nearly ripe.

June 3, 1987.—Some pond mussels had been kept in aquaria in order that the spawn might be observed. Up till this date none had been noticed. The mussels were examined and found to have red ovaries. The yolk granules poured out of the egg. The zona appeared to be two-layered. The nucleus seemed to be simply a naked sphere of clear protoplasm. Sperms were obtained from a dirty-yellow or amber-coloured mantle.

June 25, 1907.—Some mussels were obtained through the kindness of Professor M'Intosh, from St. Andrews.

The mantle of the mussel had its central part filled with reproductive elements, but showed surrounding that portion a more or less broad clear margin. In the female the sexual part was orange-coloured, and in the male whitish. A larger proportion of the mantle was, in most of the cases examined, filled in the female than in the male. The thin dark-orange mantle (female) showed little white bodies all over the orange groundwork. In the male the white bodies were not so distinct, but larger, measuring about $\frac{1}{32}$-inch. The eggs were of the usual type of the unripe egg, having a big pore from which the yolk granules pour, and having a nucleus with a sharp outline. The zona was all crumpled, and evidently consisted of two layers.

In the spermaries there were bodies similar to the heads of sperms consisting of a circular head with a tapering manubrium-like prolongation. Several groups of these were seen united by the ends of their manubria.

June 28, 1907.—Some of the St. Andrews mussels were examined on this date. Several males measured from 2 ins. to $2\frac{5}{8}$ ins. in length. The mantle was about $\frac{1}{32}$-inch in thickness, and was only partly occupied with reproductive organs. The females, measuring $3\frac{1}{8}$ ins. to $3\frac{1}{4}$ ins., showed thin mantles, which, as in the males, were not fully occupied by the ovaries.

July 16, 1907.—A mussel which was examined on this date had red ovaries approaching ripeness. The reproductive organs were restricted to part of the mantle.

July 19, 1907.—Six mussels from the pond were examined on this date. They belong to the lot which was sampled in April. They measured from $2–2\frac{5}{8}$ inches. One of them is shown in figs. 103 and 104. Five were males, the sixth was a female.

The mantle of the male mussels was in some cases of a light cream colour, in others of a dark cream colour. Practically the whole of the mantle, with the exception of a small portion at the anterior lower side, was occupied with the cream-coloured organs. The mantle was about $\frac{1}{8}$th inch in thickness. The organ is thinner towards the margin. The spermaries were not so prominent. The mantle shows an uniform cream-coloured surface, which under a lens is seen to be broken up into little roundish bodies. It differs from the condition seen earlier in the year. On cutting into the mantle a whiteish fluid issued; it consisted wholly of ripe sperms. Where a portion of the tissue was teazed and pressed out under a cover-glass a delicate network tissue which resembles vessels, and having associated with it groups of the heads of sperms stuck together, was made out. The sperm heads had the manubrium-like process but no tails. The tissue consists of vessels, stringy fibres, and fairly large pouches crowded with heads of sperms There are also some round cells in the pouch; they are larger than the heads of the sperms: they may be gland cells on the wall of the pouch. On dissecting the abdominal process ripe sperms, with tails, clear corpucles (fat), and groups of cells showing granular contents were found;

they were massed together or separate—probably glandular. The veins were of a dark amber colour.

The female mussel had a mantle of an uniform light-pink colour Although it is fuller than in the mussels examined in June, it is not completely filled. It was about $\frac{1}{8}$th of an inch in thickness. On cutting into the mantle a pink or red-ochre fluid was obtained. It consisted of eggs (most of which were partially or wholly emptied of their yolk contents), reddish yolk corpuscles, and nuclei. All the eggs had a distinct pore in the zona ; it varied in size, and had ragged edges in some cases as if it had been torn away from some attachment (fig 12). The nuclei are very ductile, as they pass out through an opening smaller than their own diameter. They have a sharp outline, with a distinct hyaline outside layer; the contents are granular, and enclose sometimes a nucleolus. In no case did the nucleus show a ruptured or crumpled wall. In some cases the nucleus (n) plugs the pore (fig 35). The eggs are arranged in a pouch which seems to be an expansion of a large vessel. The egg would appear to be attached by its outer layer to the inside wall of the pouch. When the egg is torn from its attachment the yolk granules usually pour out, although it is not so in every case; *vide* fig. 12, where the inner layer of the zona is evidently preventing the escape of the yolk. The inner layer appears to be very delicate. The outside of the pouch was also supplied with what looked like vessels. The mantle tissue on teazing is reduced to eggs and a stringy material, probably vessels. There is no evident amount of fat. In the abdominal process were found eggs, and some round cells with granular contents and others with brown granules. The round cells are in total size only about equal to the nucleus of the egg. Under a high power the yolk granules are amber-coloured.

These mussels were judged to be of good quality from the fishing point of view. By one authority they were referred to as "fatty mussels" (figs. 93 and 95).

Another of these mussels had a mantle which in general colour resembled a peach. It had a cream-coloured ground, with an amber mottling. The eggs were amber in colour.

SEPT. 2, 1907.—The mussels supplied at this date by the merchant were, in respect to the mantle, coloured white in some cases, cream in others, and in a proportion orange-cream.

The white mantle had a slight cream tinge. It was not thick, only $\frac{1}{16}$-inch. Under the lens it showed a close white network with translucent amber-coloured spaces between. Owing to the great development of the white branching in the inferior half of the mantle, the translucent parts are merely dots there. In the superior portion, that next its attachment to the organ of Bojanus, the branching is less close and the spaces bigger. The white branching extends over the organ of Bojanus in close connection with the surface vessels : it is along each side of the vessels and their branches. The vessels in the mantle are translucent, and their branching forms a translucent network. There are a few small patches of amber-coloured corpuscles on the superior part of the mantle, near the posterior adductor. On teazing a portion of the mantle, nothing was made out except a mass of minute corpuscles bound with connective tissue, and a few groups of amber-coloured bodies. In a portion from the superior part of the mantle there was, in addition to the above, some transparent bodies, certain of which showed part granular contents and more or less irregular outline.

Up till November 2, mussels containing ripe sperms and full-sized eggs were obtained. On this date the ovaries could still be made out on the surface of the mantle in one specimen. The reproductive elements were, however, usually hid by the fat condition of the mantle. The mussels which contained ripe sperms had mantles of the following colours:—white, light cream, and deep cream. In the females containing full-sized eggs the mantles were coloured white, cream, and yellow, with, in each case, a pinkish tinge, and dark-red. When the mantle of the male mussel is cut across the section is yellow, and from it a white fluid oozes. In the female the section is brown-mottled.

On November 2, two females were examined in which the reproductive organs were quiescent. In the first case the mantle was of a deep orange-red or chocolate, a colour nearly resembling that of a ripe mussel. The tissue was mottled with brown corpuscles. The body fluid that issued on teazing a portion of the mantle consisted of minute clear drops. In the second case the mantle was of a light yellow colour.

M'Intosh examined mussels from January to July. In January "the mantle was, when compared with an undeveloped specimen, considerably thicker. A male measuring 3½ inches in length presented in the thickened generative region large, pale, round sperm-sacs filled with minute spermatozoa, which have minute ovoid bodies with finely filamentous tails. They are lively and tenacious of life. . . . The female had the same region of the mantle crowded with a prodigious number of minute ova. In shape they are ovoid, with a transparent investment and an inner granular yolk with a pale circular area. In February the mantle . . . increased considerably in thickness. The whole surface of the mantle became speckled in both sexes with the reproductive elements. . . . The mantle in one case had increased in thickness to about ⅜-inch, and the development of the sperm-sacs seemed to proceed from the dorsal to the ventral edge of the mantle. Even in specimens in which the shell has been injured and the mantle remains thin at certain places, an immense number of ova are developed. After full maturity is obtained, as in April, the orange mantle is richly marked in an aborescent manner by racemose sperm-sacs and ducts, especially towards the margin, and when the mantle is swollen out with water the sperm-sacs project like bunches of grapes. In the female this appearance is not so evident, for the ova are grouped in masses of a circular or ovoid form and densely packed. The females at the end of May now contained comparatively few ova, and the mantle had diminished considerably in thickness. Much granular brownish pigment was present in the latter. On the 9th June the female mussels still showed some ova in the thickened dorsal region of the mantle, but the margins were pale and thin. As before, much brownish pigment was present. In July the dendritic appearance of the salmon-coloured mantle was less marked, and neither ova nor spermatozoa could be distinguished microscopically. The general stroma was granular and minutely cellular, as if a general resolution of the tissue were taking place, and the characteristics of the sexes were absent."

The eggs would, then, appear to be derived from the minute brown-coloured cells seen in the mantle of the unripe mussel. The thick fat mantle is not a necessary precursor to reproductive activity. The little brown cells seem to be supplied with chlorophyll, and are found at the end of the year in thin mantles as well as in fat mantles. Any one lot of mussels consists usually of a mixture of fat and thin mantles, showing that even where the water may be abundantly supplied with food some mussels may still, from the accident of their situation, be starved. In one case the sample may show a majority of fat, in another a majority of thin mantles.

Maturity and Spawning.

Wilson says that the mussel may become ripe when one year old. He found ripe sexual elements in mussels measuring $\frac{1}{8}$-inch in length. At the Bay of Nigg one mussel which was $\frac{3}{8}$-inch long spawned.

M'Intosh gives the spawning-time as lasting from April to June.

Spawning of the Female.—At the Bay of Nigg mussels were observed to spawn on three occasions, viz.—(1) a mussel measuring $2\frac{1}{2}$ inches on 6th April; (2) a second of the same size on 1st June; and (3) two mussels measuring respectively $\frac{3}{8}$-inch and $1\frac{3}{4}$-inch on June 30th.

Scott found that the mussels at Piel Laboratory spawned between the beginning of May and the middle of July. The eggs were being discharged some time before the sperms were observed, viz., 13th June. The spawning of the eggs usually took place during the night, but he had an opportunity of observing the manner in which they left the parent. "The embryos flow from the female in a slow distinct current. When not disturbed they settle down on the mud close to the parent as an obvious pink mass."

The mussel which spawned on 1st June had been brought from Klaksvig, Faroe, by Captain Sutherland, s.t. "Pointer," of Aberdeen. It was obtained on 1st May, and had been kept till May 31 in the basket in which the sounding-line is coiled. On being transferred to sea-water on that date it was found to be alive. It was a very old-looking mussel, and was covered with barnacles. Next day a quantity of white stuff was seen on the bottom of the vessel near the round end of the mussel (fig. 84). This was found to consist of eggs and some stringy tissue.

Spawning of the Male.—On June 30th the current of water was stopped in a box in which there were some mussels, and in the afternoon a greyish cloud was seen towards one side of the box and extending to the surface. When a drop of the water was examined it was seen to be crowded with sperms. The sperm has a tapered point and a very long tail (fig. 24). They rush about in circles with a quivering, jerky, side-to-side motion.

On 13th June Scott observed the discharge of the sperm. It was so abundant that the water in the tank became quite turbid.

Duration of Spawning.—Scott maintains that practically the whole of the reproductive elements were discharged at one emission, extending from one to three hours. The same animal did not again set free any more reproductive elements. When such a spent mussel was opened and examined the whole reproductive organ was found to have collapsed.

This was not my experience in the case of the mussel that was brought from Faroe. It first extruded eggs on 1st June, and it spawned several lots up till June 5th. It may have, however, been a little irregular, since the mussel had been kept under exceptional conditions.

According to Mr. King, the mussels at Budle Bay, Northumberland, spawn in July, August, and September. In warmer seasons they spawn earlier, and *vice-versa*; 50°–60° F. is a fair heat in summer at Budle Bay. Lebour states that "Mr. Mitchell finds that there are two breeding seasons, one in Spring and one about August." Mr. Masson, Findhorn, who attended the demonstrations to fishermen at the Laboratory in 1906, informed me that in the river there the mussels empty [spawn] during a spate, and then fill up again. Red mussels (female) were more common than yellow (male). At Montrose, Fullarton and Scott report that "Mr. Johnstone was of the opinion that the mussel spats in May, June, August, and the beginning of September, while others held that the mussels spat all through the year."

FERTILIZATION.—M'Intosh and Wilson believe that the fertilization of the eggs takes place outside the body of the female.

Wilson effected artificial fertilization of the eggs by mincing pieces of the ripe ovary and testes separately in water and then by mixing the two fluids.

Scott considers that fertilization takes place within the female. He made some experiments to demonstrate this. At Piel the first eggs that were spawned were not fertilized. After the first discharge of sperms, however, the eggs were always fertilized.

Garner thought that the mussel was hermaphrodite and that the eggs were already fertilized when discharged.

The Mature Egg.

When the eggs are present on the bottom of the aquarium in quantity, they show a pink colour. In the case of the Faroe mussel the colour of the eggs was hid by some colourless tissue that was extruded with them.

Wilson describes the ripe egg thus:—"The mature egg after extrusion is quite spherical and very opaque, on account of the large development of deutoplasmic (vitelline) granules. The vitellus appears greenish-brown by transmitted light. The egg membrane is distinct. The nucleus and nucleolus are not visible in a normal mature egg, a less opaque region marking their position. The hyaline investment noticeable around the intra-follicular egg forms a broad, very translucent sheath to the ripe extruded eggs. It is presumably adherent to mature eggs naturally extruded—certainly so in the case of artificially-liberated ones. Many spermatozoa wriggle into it and cause the egg to rotate. No micropyle has been observed in it. If the vitelline membrane be ruptured the nucleus escapes as a spherical body bounded by a definite membrane and enclosing a nucleolus."

The eggs spawned by the Faroe mussel showed the following characters (fig 6). They were, to the naked eye, greyish in colour with a faint amber tinge. They were round in some cases, usually oval, measuring ·07 by ·06: ·07. One was as long as ·1mm.

The yolk is seen to be broken up into several large corpuscles or divisions, and at the periphery there are minute corpuscles similar to those that are found in the developing egg.

The zona is wrinkled, corrugated on the outside, and raised into little papillæ. The corrugations seem to be due to the yolk being in large corpuscles which boss the zona. It has two definite layers, and in addition some eggs show what looks like a thin membrane on the yolk. The latter may be simply the sharp outer edge of the protoplasm. There are little protoplasmic thread-like projections from parts of the zona, possibly from pores (fig. 8). In one case a pitted condition of the zona was thought to be made out.

A faint indication of the nucleus was made out in some, and surrounding it large yolk corpuscles or divisions composed of the minute yolk corpuscles. The large nucleus seems to be broken up more or less into large round bodies.

On pressing the egg by means of the cover-glass, the contents do not flow out so readily as in an egg dissected out of the mantle in a ripening ovary. In the latter case nearly every egg exhibits the loss of some of its yolk contents.

One of the naturally spawned eggs, when pressed lightly, took a pear shape with a conical end. This seemed to be at the micropyle, and to be formed by the forcing of the egg contents to project through it.

But the egg contents, being now more cohesive, withstood the pressure without breaking up.

When the egg was crushed the yolk corpuscles poured out all oscillating, leaving no nucleus to be seen ; there were some groups of corpuscles a little larger than the others. The zona retained its shape and appeared quite smooth in some, although in others it was still tuberculated.

When the egg was squeezed sufficiently to cause some of the contents to flow out, a sort of perivitelline space began to appear, formed after the escape of a quantity of yolk by the entrance of water. In the partially emptied egg there were protoplasmic threads from the remaining portion of yolk to the internal surface of the egg-shell, and the zona had lost its corrugations. Wilson gives a drawing of an egg that had apparently lost some of its contents; in it little protoplasmic threads connecting the inside of the zona to the segmented mass left inside are indicated.

The clear protoplasm of which the nucleus in the ripening egg consists appears now in the ripe egg to have extended through the yolk, binding the granular matter together, and apparently making a clear, sharp, external layer to the yolk-sphere.

When the yolk granules issued through pressure, they sometimes took up some of the clear protoplasm, and they are seen covered with a clear layer—a little entity consisting of one or many yolk corpuscles covered with a clear protoplasm (fig. 41).

Out of one egg there was pushed a clear network-like mass (fig. 7), which might have been a crumpled membrane. The egg from which it came was continually changing its shape. The "network" was seen free in another case, away from the egg.

Sub-Dividing of the Unfertilized Egg.—Some of the eggs were kept overnight in a dish. By next day some of the eggs had given off little spherical bodies of various sizes. They were formed by the outflow of the egg contents through the micropyle.

These bodies consist of a larger or smaller number of granular yolk corpuscles surrounded by clear protoplasm. Sometimes they can be seen attached to the egg at one point like a number of little balloons attached to a large balloon. They may vary in size or may be all nearly equal (fig. 16). Changes were observed to take place in these bodies, even while the egg was examined. A dark globule was added to one egg as I watched. They become detached, and go off resembling in appearance a little egg. Although they have a sharp outline they have no cell wall (fig. 41).

During the night the eggs had been actively budding off these little spheres, so that next day it was hardly possible to treat any of the eggs in the dish as normal eggs.

Some of the eggs showed a hyaline investment, which appears to be formed by the exudation of clear protoplasm from the egg. An egg had a crumpled hyaline investment, which looked as if it were the outer zona layer which had become loosened.

Artificial Fertilization.—On June 3 some eggs were obtained from the mass lying near the mussel. They were motionless and unsegmented. Some of them showed a little refractive protoplasmic process on the outside of the zona.

A piece of the mantle of a male mussel was put into water. The water became milky, and when examined was found to be alive with active sperms.

Some of the fluid was put, by means of a pipette, into the dish containing the eggs. It was possible to see under the microscope the sperms whirling about among the eggs.

At 1 p.m. one of the eggs showed a number of little protoplasmic processes sticking out at right angles from the zona (fig. 8). They seem to be detached from the zona, though probably connected by a very fine pro toplasmic thread, which was invisible under Zeiss DD. The sperms kept boring away, but did not seem able to get closer to the zona than s shown in fig. 8. There was a protoplasmic boss sticking out of the micropyle. This was generally present, and usually on the lower side of the egg.

One egg had its zona covered with papillæ. Another had three or four sperms stuck with their pointed ends against the zona. A clear layer outside the zona was made out in one egg; it seemed to me merely an exudation of protoplasm.

The inner of the two zona layers is applied close to the yolk, as is shown by the protoplasmic boss, which is constricted by it (fig. 18). A narrow clear division is seen between the two layers of the zona.

At 3 p.m. segmentation had occurred in several eggs. In one egg the division into two was proceeding from one side (fig. 10). Another egg was segmented into a macromere and a micromere; the protoplasmic boss was on the macromere (fig. 21). Sometimes it stands right across the dividing line. Figs. 10, 11, 13, 20, 21, 22, 28, and 29 represent conditions found at 3 p.m. Most of the eggs were in the two-celled stage (fig. 13).

Some eggs had taken a kidney-shape, having a hilum deeply inserted (fig. 20). The niche was filled up partly with translucent material. The zona seems to thin away over the notch sometimes. The division of the egg takes place within the zona, and is not apparently taken part in by the zona.

In the two celled stage, one egg after being quashed retained its previous two-celled shape (fig. 38). A nucleus was seen in it; it simply showed a little sphere with yolk granules attached. Round the inside of the investment there was a number of small clear corpuscles larger than yolk granules. The yolk granules when poured out oscillated.

In one case of crushing the egg I saw some clear protoplasm of yolk granules after they issued form into a sphere exactly resembling a nucleus. The yolk corpuscles caused the "nucleus" to quiver. Then the excess of yolk granules moved away from it.

The nucleus seems to mean simply a collection of clear protoplasm in the centre of the cell. It may, on the egg being crushed, break up, or it may retain its shape after the yolk granules have poured out. In the developing egg the nucleus is not intimately bound to the yolk granules; in the ripe egg it is distributed through the egg mass.

In a three-celled stage a little clearer area in the centre indicated the presence of a nucleus in each cell (fig. 17). When the eggs were crushed the nuclei were seen to be similar to the nucleus of the ripening egg—a clear vesicle-like body showing no structure under Zeiss D.D. and oc. 2 (fig. 14). The nuclei were visible externally first in the three-celled stage.

Division into four cells was noticed (fig. 30).

At 7 p.m. development had not proceeded further than at 3 p.m. Fig. 25 represents one of the eggs at that time.

By the next forenoon, the eggs in the dish had not advanced; they appeared to be dead. A number of them had a gelatinous network round them. One egg which showed a gelatinous outer network measured ·06mm. in diameter; it is small, and may have lost some of its contents.

On June 5 a new lot of eggs had been spawned

INFUSORS AND DECAYING EGGS.—On June 10 a big heap of eggs remained near the mussel. A sample was examined. They were disorganised. There was a great quantity of very small and also big infusors among them, and the smallest infusor was not too big to get into the egg by the micropyle. They did not appear to be able to get into the egg.

Next day the infusors were quiet, apparently encrysted. On June 13, in the same dish, the infusors were big and again active. The eggs have almost altogether disappeared. I noticed infusors darting into the egg-shells, going round inside and then out again. In one egg-shell two infusors were lying still.

On June 15 the mussel was dead.

DEVELOPMENT.—According to Wilson—"In 20 hours or a shorter time after fertilization, the ciliated embryo rise, it may be to the very surface, in warm, calm, water. They are moved hither and thither by the currents and by their own locomotor apparatus, the cilia, and latterly the velum."

Scott observed that the embryos rose "from the bottom at the end of 12 hours. They remain free-swimming for at least four days."

Some spawn that was observed on June 30 at the Bay of Nigg was examined. The eggs were in various stages of segmentation up to the ciliated larva. The motion in the eggs and larvæ was very slight, and it is questionable if it would have been sufficient to raise them off the bottom. Some of the eggs remained on the bottom next day.

When 12 days old, the larval mussels are, Wilson says, almost semicircular, the hinge-line being straight. In later forms, the prismatic shell-substance begins to be deposited round the margins of the valves. The growth takes place most rapidly antero-posteriorly, the mussel thus assuming the elongated characteristic form of the adult. With the advent of the prismatic shell, the velum is atrophied and the mussel sinks to the bottom or lights on seaweeds, zoophytes, etc. The foot, at first vermiform and highly extensile, is used for progression; at the proximal region of the foot the byssus-gland secretes the byssus wherewith the mussel may be anchored.

In July and August, M'Intosh observed that the surface of St. Andrews Bay swarmed with minute mussels of a somewhat circular outline and showing four branchial processes behind the foot. The young mussels, according to the same author, are found settled on zoophytes in July. At Kiel, Mobius states that the young mussels attach themselves in the latter half of June.

THE SPAWNING OF MODIOLUS.

FEMALE—*February* 27, 1907.—The eggs in a Modiolus examined were nearly ripe, and they formed a brick-red dust to the naked eye. The most of them showed a germinal vesicle in the middle of the opaque-red yolk. Lots of the eggs are pitcher or pear-shaped. They measure ·1mm. in diameter. Some were ruptured.

MALE—*June* 9.—Two Modiolus that were kept in a tank measuring 5 feet by 4 feet by 2 feet deep, were seen to be spawning. A grey cloud was seen to spread from them over the bottom of the tank and ascend in a wide spiral up to the surface (fig. 98). The motion was due to the current of water in the tank. The cloud of sperms formed a thick layer on the surface of the water. A drop of water that was just covered by a cover-glass $\frac{5}{8}$-in. in diameter contained 11 spermatozoa. The sperm resembled much that of *Mytilus edulis*. Round the head there appeared a lighter ring—a sort of halo. After some time the whole of the tank was tinted with the colour. It was first noticed at 11 a.m. At 8 p.m. it was still to be seen, but more generally distributed. A current of water had been steadily flowing into and out of the tank.

SPATTING.—Several specimens of modiolus, obtained in February 1907, were kept alive in aquaria at the Laboratory. The water flowing out of these passed into the big pond. On July 17 some twigs which had been put into the pond on April 25, 1907, for the purpose of collecting spat were found to have young modiolus attached. Some were also attached to the cord by which the twigs were anchored. The following are the sizes of the young:—$\frac{3}{32}$, $\frac{1}{8}$, $\frac{1}{8}$, $\frac{3}{16}$, $\frac{3}{16}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{3}{8}$, $\frac{3}{8}$, $\frac{3}{8}$, $\frac{7}{16}$. They were, at most, five months of age. They were regularly scattered over the branches of the twig, and had attached themselves, no doubt, just at the end of the pelagic stage. They had not been attached three months. If the pelagic stage does not last more than a month, these horse-mussels must have been under four months of age.

The possibility of their having entered the pond by the inlet from the sea may be neglected, since, so far as I am aware, modiolus has not been found near the Bay of Nigg.

The young modiolus were put into a box, which was covered with a lid to exclude the light; some were still attached to the twigs, others were free on the bottom of the box. On September 2nd some of the latter had climbed up the side of the box to the surface of the water; others remained attached to the twigs or on the bottom.

THE GROWTH OF THE MUSSEL (*Mytilus edulies*).

Observations bearing on the growth of this shell-fish and its behaviour under certain conditions have been made on mussels of different sizes that have been kept in the Laboratory for from one to two years.

One lot of mussels had been taken off the rocks at St. Andrews. They measured about 1 to $1\frac{1}{2}$ inch in length. Obtained in July, 1904, they were kept in aquaria with a constant run of water till April 6, 1905, when they were examined. They appeared then to be in good condition, though not very fat.

On July 4, 1905, some mussels taken off the rocks were measured, and three lots were separated.

In A they all measured $\frac{3}{16}$ inch in length
„ B „ „ 1 „ „
„ C „ „ about $1\frac{1}{2}$ „ „

They were put into vessels supplied with a steady run of sea water. Mud gradually accumulated on the bottoms of the aquaria until a fairly thick layer was formed. Now and then this deposit was removed.

A.—On March 8, 1906, the mussels of lot A were measured; their lengths were found to be $\frac{3}{16}$, $\frac{3}{16}$, $\frac{1}{4}$, and 9 were slightly over $\frac{5}{16}$ inch long.

When examined on August 5, 1906, the mussels were found to be all of a peculiar shape, roughly barrel-shaped. They were broad laterally, convexly curved above, concave below. Their sizes were—$\frac{1}{4}$, $\frac{5}{16}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{3}{8}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{7}{16}$.

On Feby. 25, 1907, the measurements were—$\frac{5}{16}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{7}{16}$, $\frac{7}{16}$, $\frac{7}{16}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$. The largest was attached to the side of the aquarium a little above the bottom; the others were in the mud.

On March 22, 1907, the mussels were put on a floating tray, the bottom of which was made of wire gauze. They were about 1 inch below the surface.

On May 28, 1907, two were dead ; they measured $\frac{5}{16}$ and $\frac{7}{16}$ inch ; they were apparently choked with algoid growth.

The remainder were measured and opened on June 11, 1907. They measured $\frac{3}{8}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$ inch. The largest was a male, and the reproductive organs appeared to be ripening.

In about two years' time, then, the greatest growth of the lot had been an addition of $\frac{3}{8}$ inch to the original size of $\frac{3}{16}$ inch, while the least increase had been only $\frac{1}{8}$ inch.

B.—They measured on July 4, 1905, 1 inch in length.

August 5, 1906.—The mussels were examined and the following were the respective lengths :—$1\frac{1}{16}$, $1\frac{1}{8}$, $1\frac{3}{16}$, $1\frac{3}{16}$, $1\frac{3}{16}$, $1\frac{1}{4}$, $1\frac{1}{4}$, $1\frac{1}{4}$, $1\frac{1}{4}$, $1\frac{1}{4}$, $1\frac{5}{16}$, $1\frac{5}{16}$ inch. A dead shell measured 1 inch. Some of them were buried in the mud at the bottom. Others were up on the sides of the box. It was possible to detect the increase in the shell in two of them ; it was in part of a yellow colour.

On Feby. 25, 1907, the measurements were—$1\frac{1}{16}$, $1\frac{3}{16}$, $1\frac{3}{16}$, $1\frac{1}{4}$, $1\frac{1}{4}$, $1\frac{1}{4}$, $1\frac{1}{4}$, $1\frac{5}{16}$, $1\frac{5}{16}$, $1\frac{5}{16}$, $1\frac{3}{8}$, $1\frac{3}{8}$ inch.

On March 23, 1907, the mussels were divided into two lots : 6 were put on a floating tray in which they were covered by about 1 inch of water ; 6 were left among the mud on the bottom of the aquariam in which the tray floated. There was a depth of 7 inches of water in the aquarium.

April 13, 1907.—The mussels on the tray had anchored themselves. One had cast off its byssus and had moved away a bit. Those on the bottom are beginning to move about through the mud which is fairly deep.

June 11, 1907.—Those on the tray were—$1\frac{3}{16}$, ♂, ripe ; $1\frac{1}{4}$, ♀, ripe ; $1\frac{1}{4}$ ♀, ripe ; $1\frac{1}{4}$, ♀, ripe ; $1\frac{5}{16}$, ♀, ripe ; $1\frac{3}{8}$, ♀, ripe. The mussels in the mud measured—$1\frac{1}{8}$, ♀, ripe ; $1\frac{3}{16}$, ♂, ripe ; $1\frac{1}{4}$, ♀, ripe ; $1\frac{5}{16}$, ♀, ripe ; $1\frac{5}{16}$, ♂, ripe ; $1\frac{3}{8}$, ♂, ripe.

In two years the largest survivor had only added $\frac{3}{8}$ inch to its length, while one had only grown $\frac{1}{8}$ inch. They were, however, ripe.

C.—They were originally $1\frac{1}{2}$ inch long, July 4, 1905.

On March 8, 1906, they were measured, and the following sizes were obtained :—$1\frac{1}{2}$, $1\frac{1}{2}$, $1\frac{1}{2}$, $1\frac{1}{2}$, $1\frac{1}{2}$, $1\frac{9}{16}$, $1\frac{9}{16}$.

On August 5, 1906, they measured $1\frac{1}{2}$, $1\frac{9}{16}$, $1\frac{9}{16}$, $1\frac{9}{16}$, $1\frac{9}{16}$, $1\frac{11}{16}$, $1\frac{11}{16}$. They all show evidence on their shells of having grown.

On September 9, 1906, one taken out dead measured $1\frac{1}{2}$ inch. The mussels seem to mass themselves at the bottom of the aquarium, on the side next the window ; this appears to be the darkest corner in the glass vessel.

On Feby. 25, 1907, they measured $1\frac{9}{16}$, $1\frac{5}{8}$, $1\frac{5}{8}$, $1\frac{5}{8}$, $1\frac{3}{4}$, $1\frac{13}{16}$ inch.

They were, on March 22, 1907, put into a tray which had a bottom made of wire netting ; it floated in a tank. The mussels were submerged about 3 to 4 inches.

On June 11, 1907, on examination the following particulars were found :—$1\frac{9}{16}$, ♂, ripe ; $1\frac{9}{16}$, ♂, nearly ripe ; $1\frac{5}{8}$, ♂, ripe ; $1\frac{5}{8}$, ♀, ripe ; $1\frac{11}{16}$, ♀, ripe ; $1\frac{3}{4}$ inch, ♂, ripe. They were all well-conditioned.

The maximum growth in two years had been only $\frac{1}{4}$ inch, while the least growth had been only $\frac{1}{16}$ inch.

D.—Some old mussels which had been living in an exposed situation were obtained from St. Andrews on April 4, 1905. The shells were thick, rough, dirty-coloured, and of a slatish hue. Some that were opened were found to contain poorly-conditioned animals. According to Fullarton, such mussels are called "Crocks" at Montrose; Scott and Baxter say that they are in Lancashire known as "Blue-nebs." Several of these, measuring 2½ inches long, were separated; they were kept in an aquarium or box with a current of water steadily flowing through it.

On April 6, one spawned; a small pinkish mass was seen lying near it on the bottom of the box. The eggs lay there till April 12. They were then examined and found to be decomposing; they were evidently not fertilized.

March 8, 1906.—One of the mussels was dead.

May, 1906.—Another that was dead was measured and found to be 2½ inches in length.

August 5, 1906.—Two more dead shells measured each 2½ inches in length. Two remain alive; they measure 2½ and 2$\frac{9}{16}$ inches.

September 6, 1906.—One of the mussels has moved about on the bottom of the box and left a track of byssi (see pp. 242 and 343).

February 26, 1907.—The mussels measure 2½ and 2$\frac{9}{16}$ inches.

March 22, 1907.—The mussels were put on to a floating tray, in which they were submerged about 1 inch.

April 13, 1907.—The mussels have made quite a heap of muddy excreta below them on the bottom of the box. One had its round end sticking up out of the water, and it remained thus for eight days, when it sank again.

June 11, 1907.—They measured (1) 2½ inches, a male; it had a thin mantle, and was getting ripe; (2) 2⅝ inches, rather thin mantle, was getting ripe.

In two years one has grown ⅛ inch; the other has not increased in size.

Taken all over, the flesh of these mussels (A, B, C, and D) was in average condition of fatness. Their shells, however, are characteristically shaped. They are rounder, of greater thickness from side to side, but not so high as more rapidly growing mussels. In figs. 26 and 27 are shown two views of one of these mussels, and in figs. 31 and 32 two views of one of the mussels of the same length, but which had grown on a screen in the large pond.

Conditions Favourable and Unfavourable to Growth.

The rate of growth of the mussel depends on a number of factors which may be briefly summarised as—(1) the quantity of food, (2) salinity of the water, (3) presence and quantity of mud, sand, and filamentous algæ, (4) length of exposure to the air during each tide.

Spatting.—As a rule mussels spat readily, and in large quantity; the scarcity of mussels in a locality is not usually due to a deficiency of young. The young may not have a suitable area upon which to settle; they may settle too high up, and in consequence be uncovered for too long a period each tide. They may settle on a high scaup and swamp it, and the increased competition for food that results will militate against the growth of the individuals.

In July and August the surface of St. Andrews Bay, according to M'Intosh, swarmed with minute mussels of a somewhat circular outline. The same author states that they appear in the zoophytes in

July, like grains of millet seed, measuring from $\frac{1}{71}$ to $\frac{1}{21}$ inch in length. Young mussels have been noticed on the ropes of the salmon nets about the middle of June.

The young mussels seem to settle high up in greater profusion than in the deep. On a wharf the upper limit of the mussels was between tide-marks, but several feet below high-water mark. Barnacles (*Balanus*) settle high up. A curious circumstance was noted with respect to the attachment of barnacles (*Balanus*) in a slate tank. The inflowing water was taken down to the bottom of the tank by means of a rubber pipe. The water leaving the mouth of this pipe impinged at once on one of the sides, and here an area of about 6 by 2 inches was covered by barnacles, but nowhere else on the tank, which was 5ft. by 2ft. 6ins. broad, was any barnacles attached. It would seem as if the impinging against the hard surface helped the barnacle to become attached.

Wilson found on the ropes of the salmon nets mussels measuring from $\frac{1}{16}$ to $\frac{3}{16}$ inch in length. The largest were got near the surface, and the smallest near the bottom. They were at most five months old. M‘Intosh observed mussels up to $\frac{7}{8}$ inch in length on the buoys of the salmon nets; the buoys are in the water from February to the end of August.

At Montrose, Fullarton and Scott say that the bulk of the spat is carried out to sea by the quickly-running tide. Dredging the navigable channel destroyed seed and prevented it settling.

In the experiment of laying down mussels in Coquet, Meek found that the mussels grew there to a good bait size and were well filled. The unfavourable circumstances in that locality were (1) the mud which comes down the river during a fresh flow, and (2) the dredging of the harbour, which would interfere with the lodgment of spat. M‘Intosh, however, observed in the Tees "that immediately (100 yards) behind the dredger, and directly in its track, young mussels from $\frac{1}{12}$ inch to $\frac{1}{8}$ inch long, with dull yellowish or pale olive valves, occurred on 11th June. These small examples attach themselves to fragments of stone broken by the dredger, or to stratified clay, so that the fresh surface left after the operations of the steam dredger is soon covered with mussels."

THE MUSSEL BED.—According to Calderwood—"The mussel will grow on almost any natural sea or estuarine bottom, but the rich flats where sand and gravel are covered by mud charged with diatoms, infusoria, spores of algæ, and other vegetable matter rear, large fat mussels most quickly. . . . Mussels grow well in some places where they are covered at low water by 10 to 15 feet of water, and in the beds of estuaries where they are never uncovered. . . . The favourite position of the mussel may be said to be between the low-levels of spring and neap tides. . . . In Holland the Government beds are usually laid down where the water has a depth of from 7 to 15 feet at low tide. The mussels grow commonly to a length of 2 or 2½ inches. They are, therefore, of excellent quality. . . . Beds should be protected as far as possible from the deposition of silt. This evil, if present, can only be remedied by transplanting the mussels from the high bed, and causing the available currents to scour and wash down the deposit."

The Budle Bay mussel is, Mr. King states, much broader than the Boston mussel, which is inclined to be round and plump.

According to Lebour, "the mud and sand brought down by floods and currents during storms are hurtful, as they frequently choke up and kill large patches of mussels." In the river Blyth many of the mussels are "burrowing in the mud generally so deep that only the smallest part of posterior end of the shell is visible." In the river Aln "many of the mussels are very small and thin, too small and thin to be of any value for bait. Although all the specimens examined in October and November were quite thin, in the Spring the reproductive lobes were spreading into the mantle to a small extent, so that they probably still shed some spat."

I received some information from the Elginshire deputation of fishermen regarding the mussels near Dingwall and at Findhorn. At the former locality mussels about two inches in length were to be obtained in September, but by next Spring nothing remained of them but empty shells. The fishermen said that they filled up with sand.

In the Findhorn, according to Mr. Masson, mussels taken out of the deep in September and put into shallow water open up to the warm sun and die Calderwood mentions that "seed taken from deep-water beds will not admit of being carried so well as seed which is inured to exposure from being left bare by the tide."

Gregg Wilson, in his report on the mussel beds of Northumberland, recommended that, "where there are not at present mussels, but where there is shelter from storms, freedom from shifting sand and mud, a fairly hard bottom, and a good current of water, mussels might be laid down by way of experiment."

Mr Wm. M'Bride, jnr., Pirnmill, Arran, who was one of the deputation of Buteshire fishermen attending the demonstrations in 1906, informed me that the mussels on the wharves grew the fastest in that locality. According to M'Intosh, " the fishermen regard the mussels got on the piles of the bridge the finest examples. (River Esk, England.)"

At Kiel the mussels, according to Möbius u. Meyer, are cultivated on branches of trees that are stuck into the bottom below low-water mark.

The salinity of the water exerts an influence on the size of the mussels. Brandt says in this connection that in Kielbight the mussel grows to a size of 110mm. (4½ inches), but in the Gulf of Bothnia, where the salinity of the water is less, the mussel only reaches a size of about one inch. Moreover, the shell of the Baltic mussel is thinner and lighter than the North Sea mussel, notwithstanding the fact that the water of the Baltic has the larger proportion of lime in it. In the Kaiser Wilhelm Canal Brandt found that the salinity of the water decreased as one proceeded along it, from east to west. Ripe mussels were found of a smaller size in the fresher parts, viz., at 17–22mm. in length (⅔–⅞-inch), than in the salter portion of the canal, where the smallest were from 35 to 40mm. (1½–1⅗-inch) in length.

THE AGE OF THE MUSSEL.—"A size suitable for bait, viz., 2 inches in length, would be about two years old in a favourable locality. In less favourable localities, where the mussels are left long dry, the time taken to reach the size indicated appears to vary from 4 to 8 or 10 years" (Calderwood).

In the Wash, according to Donnison, "a 2 years old mussel on a high scalp is probably not 1½ inches in length, but on low ground the length is probably 3 inches."

Two lots of mussels were obtained from St. Andrews. The first lot, which was estimated to be composed of two-years-old mussels, measured from $1\frac{2}{8}$ to 2 inches, shown in natural size in figs. 1 and 2. The other lot, consisting of three-years-old mussels, varied in length from 2 to 2½ inches (figs. 4 and 5).

In Northumberland Lebour states that a mussel 2 inches long and about ⅝-inch in thickness is considered a fair bait. "The mussels," at Budle Bay, "are from a year and a half to two years old when they are lifted and planted in the stream channels, where they are covered for six or seven hours each tide, or even not uncovered at all, as these last are perhaps the best. They reach bait size quickly, and are generally allowed to fatten for a year, so that at four years they are ready to be sold for bait or food, but are often kept until they are 5 or 6 years old." The Budle Bay mussel is an excellent bait at 3 years of age (King).

Transplanting.—In the Eden, Wilson says, the scaups are mostly found on muddy flats, uncovered at low water. They are cropped in rotation. The "seed" consisting of young mussels from ½-inch to one inch or thereabouts in length, are dredged from parts where they have been deposited naturally. These have in many cases previously carried a crop of mussels. The seed may, however, grow on places unadapted for rearing saleable mussels. The rate of growth is very rapid, an inch to an inch and a half in a year being no uncommon addition to the length. It seems to be the case that the longer the mussels are dry between tides the slower is their growth. The quickest growth is made by those lying in the bed of the stream, where they are never uncovered; the higher the scaup the less chance of success. Some hurdles erected for Professor M'Intosh in the Eden became densely covered with young mussels. Mussels are commonly dredged in the Eden 4¾ inches in length.

According to Fullarton and Scott, "the bed of the river is a fruitful source of seed at Montrose. Sometimes seed has been obtained by taking quantities off the foreshore rocks. When the seed attains a suitable size, ½–¾-inch, about the size of an ordinary bean, it is dragged from its bed by means of rakes into the cobles. If the mussels are left long on a high bank they become stunted in appearance, and additions take place to the shell in thickness rather than in length, the consequence being that the mussel assumes an inelegant shape and a blunted aspect at the posterior end, and instead of a brownish-black layer of periostracum on the outside of the shell, a greyish coating there indicates the dwarfing of the mussel. These mussels are locally known as 'crocks.' When they are transferred to lower banks, and banks more within reach of the tide, they soon begin to grow, and the capacity of the contained space becomes enlarged. It is found that the time required for the seed to mature and reach the bait size varies from three to eight years. On one of the best banks it may grow to two inches or larger in three years or so, but on most of the banks a much larger time is required. Severe winters retard the growth of the mussel."

On Budle Bay, Northumberland, King had some of the dwarf mussels found on the rocks near the shore transplanted; they were all failures. He says that a mussel requires a twelve months' growth before it will stand transplanting.

Meek writes that at Montrose seed mussels, 2 to 3 years old, are lifted from the channel and deposited on the bank, where they remain from 2 to 5 years more before they attain a saleable size. "In the Eden the seed is taken from the higher and shoreward parts of the banks at 2 to 3 years old, and removed to suitable places near the channel, where it requires 2½ to 3 years before it reaches bait size."

Scott and Baxter describe transplanting operations which they carried out at Morecambe. The mussels, which were small through overcrowding, were removed to lower ground where they were practically always under water, being only exposed for a short time at very low ebbs. "Many of these mussels were what are locally known as 'blue-nebs'—very old mussels with thick shells of a dead-blue colour, much corroded, especially in the hinge region, and having no epidermis on them. When the shell is opened the animal is usually found to be thin and watery. These mussels are commonly met with on the sea-shore. They are exposed to the air for a long time between each period of high-water and are beyond the reach of a continuous supply of food. They may justly be regarded as mussels that have ceased growing and are only existing." At the end of five months they had grown $\frac{3}{8}$-inch, and instead of being thin and watery, they were in fine condition. Six months after transplanting some mussels that originally measured $1\frac{7}{8}$-inch were found to have added $\frac{3}{4}$-inch to their length, while the mussels that had been left in the original bed had increased $\frac{1}{4}$-inch in the same period. The authors drew attention to the fact that it is comparatively easy to detect a mussel that has been transplanted. The new part of the shell is black and clean, in contradistinction to the slatey-coloured originally stunted shell. *Vide* fig. 105, which is a drawing of a transplanted mussel from St. Andrews, natural size. A–B represents the original seed; B–C increase in the shell after transplanting.

The mussel that grows to a full size in the deep without transplanting has a uniform shell, darker and cleaner. The barnacles (*Balanus*) do not settle on mussels in the deep to any considerable extent.

THE MUSSELS IN THE LABORATORY AND POND.—None of the mussels in the Laboratory grow to any extent. They were supplied through the upper reservoir from the inlet pipe of the big pond. In the pond a large quantity of mixed mussels were got. They were attached in a broad row on the side of the pond about a foot from the bottom, and three feet below the surface of the water at one part, and six feet below it at another.

They were most thickly packed near the inlet of the pond, and extended along one side, across the end, becoming gradually fewer. Practically none were found on the third side. It is remarkable that they were not spread all over the pond. The barnacles (*Balanus*) were spread all over the sides right up to the surface of the water.

The row of mussels coincided with the line that the current flowing into the tank takes. A wire-netting screen inside the tank intercepted the current to some extent, and the mussels attached themselves to it in quantity. On one occasion when the screen was removed the greater part was choked with a sheet of mussels. The mussels in the pond were of all sizes up to $2\frac{3}{8}$ inches and they were fat. Some baskets of them were tried as bait by the local fishermen, and they were found to do just as well as the mussels they were using.

Mussels were found in the upper reservoir tank up to a size of $1\frac{7}{8}$-inch, and when examined in November they showed thin, ill-conditioned animals. This seems to indicate that the water-supply was poor in suitable food, generally so for part of the year.

The pond itself would probably breed its own supply of diatoms and other food, and that may account for the fatness of the mussels there.

The water supplied to the Laboratory contained, no doubt, at certain times of the year a good supply of suitable food, but probably on the whole the quantity of food was not abundant. That will account in some measure for the fact that the mussels grew so little. But there were other mechanical drawbacks. The vessels in which the mussels were kept soon had a deposit of fine mud on the bottom. This was in part excreta; the mussel took in the fine mud that entered in suspension in the water supply, and which, if not arrested by the mussel, would have largely passed out by the overflow, and excreted it in a compact ribbon form. It was now much heavier, and lay on the bottom close to the mussel. This would tend to arrest fine mud.

When the mud accumulated to the depth of possibly half-an-inch, the mussel sometimes moved about to free itself from it. It might simply shift its position on the bottom, showing its movement by the track it left in the mud, or it might climb up the side of the vessel.

Some mussels taken off the wall of the big pond were put into a fish-box, which was sunk to the bottom near the inlet valve. The bunches of mussels were clean when they were put in. In the Spring (April), after having been in the pond since the previous November, that is, for a period of five months, the box was examined The mussels were now found to be embedded in a thick bed of slimy adhesive mud. The bottom of the pond had comparatively little mud on it at that part. The mussels had gradually collected the mud from the water that passed through the box, and when they passed it out in the form of excreta it had been retained there. In the bottom of the mud some of the mussels had been choked, the empty shells alone remaining. These had been bound by the other mussels in the bunch, and had not been able to free themselves. Other individuals had grown.

Some bunches of these mussels were washed and put into a floating box, in which the mussels were submerged about six inches, and were three to four feet above the bottom of the pond. On July 19, when they were examined, they were found to have collected a fine greasy coherent mud in a corner of the box where there was no opening in the bottom to permit of the excreted mud escaping, as it could do in other parts of the box. This indicates their capacity for collecting mud. The box was floating in a part of the pond which was shaded by the floor of the tank house. The mussels were judged by an authority to be of good quality. The surface of the box was thickly coated with barnacles (*Balanus*), especially on the side facing the inlet of the pond.

In addition to the accumulation of mud, the mussels in the aquaria in the Laboratory suffered under another unfavourable condition. Being exposed to the light, they were in the summer months coated more or less with a growth of filamentous algæ, which also lined the interior of the aquarium. This prevented them feeding to their full extent. Fig. 56 shows a mussel fully opened.

The mussels were in the quality of their soft parts in good condition generally, but they had not grown. The majority had survived. The permanent conditions, salinity of the water, and quantity of food were suitable; the latter was possibly not specially favourable. The local and temporary condition, viz., accumulation of mud and algoid growth, were unfavourable. They were never left dry, so that they had not this recognised interference with growth to contend with. The mussels were put into floating trays to escape the mud, but this arrangement intensified, if anything, the growth of the algæ, in that way neutralising the advantage accruing from the freedom from mud.

A sufficiently strong current running over the mussels, or a current interrupted and reversed, such as is afforded by the tide, might have prevented the accumulation of the mud. It would also appear to be an advantage that the mussels be kept away from a strong light, by being well submerged, where these growths would not develop.

Feeding.—When the apertures of a mussel are wide open (fig. 56), a large quantity of water is taken in, and the water issuing by the anal siphon forms a very considerable current, as has been noticed when the mussel was near the surface.

When a mussel is surrounded by a thick layer of mud, or with filamentous algæ, it does not open its inhalent aperture freely, and therefore cannot obtain a full supply of food. Even although there is a considerable quantity of mud in suspension in the water, that does not seem to prevent the mussel opening its inhalent aperture to the fullest extent. Diatoms, foraminifera, and spores have been found in the mud in the aquaria.

The mussel sometimes rests a long time with the valves of its shell practically closed, even in clear water.

I made some experiments on the behaviour of the mussel when exposed to very muddy water. A mussel was left in clear running water until it opened its apertures fully. A quantity of muddy water was then poured out close to its siphons from a pipette. The fine mud entered by the inhalent aperture, and immediately thereafter the mussel shut the frill of that part, and sometimes its exhalent siphon and its valves. It then began at once to expel the mud from its branchial chamber by the upper part of its inhalent aperture, the lower part of the same being meantime shut by means of the frills. The mud came out mixed with mucous in the form of small balls sometimes. No mud is allowed to remain in the branchial or mantle chamber of a healthy mussel. The mud, if it enters in suspension, passes on into the gut; if in quantity it is excreted without getting to the mouth. It is, therefore, apparent that an excess of mud is not of advantage to mussels.

A situation where the mussels could get diatoms and other microscopic forms, larvæ, etc., with as little mud as possible, should be most favourable for growth. It is possible that they might grow well suspended above a sandy bottom. The young attach themselves to wrecks and other objects lying on a sandy beach.

King thinks that there is more food for the mussel in brackish water than in sea-water, and that the brackish water promotes more rapid growth than sea-water. "Nevertheless, where there is any kind of shelter and freedom from travelling sand, mussels do very well in their native element. A little sand or mud is not of great consequence. The mussels are able when in a body to raise themselves up through it, the more so when a running stream is passing over them."

THE EXCRETA.—The excreta take the form of a narrow ribbon (fig. 98); it is very often discharged in small pieces, but on one occasion it was seen projecting from the exhalent siphon as a band 4 inches in length. In section it is arched, *vide* fig. 97.

In a box in which there was only a thin layer of mud, the mussel each day had a little heap of excreta lying near its round end. The water flowing through the box was not muddy to the eye. In the ribbon were found the remains of diatoms; but it consisted mainly of mud.

SENSITIVENESS TO SHOCK.—It was noticed on several occasions that on approaching a vessel in which there was a mussel with its inhalent aperture widely open, it would suddenly shut, and close its valves partly; after a little it would shortly open out again.

Difference in Colour of Mantle, and Fringe, and Siphon.

In two mussels which spawned in June, the fringe of the mantle was darker in colour than in some of the other mussels near them.

One large mussel, a male, had the inhalent siphon and the frill of the inhalent a very dark purple colour (fig. 47).

In another, the inhalent siphon was dark at its base, and had a white distal part; the frill of the inhalent had a dark amber base with a lighter amber colour on the free border (fig. 40). Another, which had principally an amber colour in these parts, had the whole of the anal siphon dark.

The frills are sometimes dark to the tip, sometimes distinctly lighter there. The inhalent siphons are sometimes tipped with white or wholly white, amber, or purple.

Some shelled mussels were examined in order to see if the difference in colouring was sexual. But no definite rule was made out.

The Movement of the Mussel.

In its larval stage stage the mussel floats about subject to the drift of the water, and possessing an independent motion from its own cilia.

When it sinks to the bottom, it travels about over seaweeds and stones, by means of its long foot, which is ciliated It extends its foot, takes a hold with the tip, and draws its body up to that position. It does this actively and moves at a fair rate.

It has also the power of attaching itself by means of its byssus. M'Intosh informs us that these young mussels, when attached to zoophytes, "can detach themselves at will, and if the water in which they are confined be impure, they become restless, and soon, forsaking the zoophyte, swim to the side of the vessel, where they swarm at the water line. In some cases they have been noticed to migrate merely from the lower portion of the zoophyte to the upper branches, near the surface of the water." They measure about $\frac{1}{70}$ to $\frac{1}{20}$-inch. Towards the end of September many minute mussels, $\frac{1}{5}$ inch long. are found on the bases of the zoophytes.

This power of moving by means of its foot and of detaching itself the mussel retains during its whole life. As a rule, active continued movement of the mussel in a line is only noticed in the earliest bottom stages.

Some mussels about $1\frac{1}{4}$ inch in length, when put on August 5 into an aquarium, became fairly active. They can move themselves along sharp end first, leaving a trail like a snail track; it is narrow, as is the foot when extended. The mussel does not need to form byssus threads when it travels on the level, at this size at least. It can draw itself round by putting out its foot at right angles to its long axis and slewing its sharp end. None were seen to go round end first. One had its foot straight out in front of the round end, but no actual movement was detected before the foot was withdrawn. Big mussels do, I think, move round end first.

All mussels are anchored by means of the threads which they form with the foot, and they may be held fast by the threads of another, or of several mussels. If they wish to shift their quarters in consequence of unfavourable conditions, as, for example, the risk of becoming choked with mud, the mussel may, without difficulty, do so if it is not bound by other mussels. In the latter case, it may have to stay and be destroyed.

When the mussel is not bound by other mussels, it may break its attachment in several ways. It must first find a solid object to which the tip of its foot may firmly adhere. Then by shortening its foot it throws a strain on to the byssus. That strain may result in snapping the threads, or some of them, upon which the strain bears, and the mussel may be able to move a little away while the remaining threads still hold fast. The mussel may then make new threads to stay it on either side in its new position. The movement may have been made in any direction, end on or sideways. From the new position it may drag itself along in another direction, snapping some more of the threads that detain it. The discs of some of the threads may become detached from the stone to which they were adhering when the strain was put on them. On an old byssus many threads are found loose and bearing their discs. Finally the mussel may cast off the whole byssus, when the byssus is too strongly attached to break, by tearing it out by its root. So far as my observations have shown, the mussel after this happens does not go very far before it spins itself new byssus threads. In fact, it would appear simply to make the one step, and then attach itself by one or several threads put out anteriorly, posteriorly, and across (*vide* fig. 67).

Two mussels were kept in a box in which the mud accumulated. One of the mussels was observed after some months to have been shifting its place, leaving a track in the mud. When the box was cleaned a track of byssi on the bottom was seen, showing the stages of its progression. This track is reproduced in fig. 67. Nos. 1–11 indicate successive positions of the mussel in its journey over the bottom of the box. The track is reproduced about natural size; the mussel is shown in natural size in fig 69. The same two mussels were put into a glass aquarium, and a track was also found on the bottom of it. This is shown in fig. 68. The mussel had evidently proceeded by little, fairly regular stages. The length of its stay at a place is indicated by the number of byssus threads there. The shorter the stay the fewer the threads. In some positions it has apparently only formed one thread, and then given it up to shift another stage.

I have noticed a mussel move itself by minute jerks within the limits of movement permitted by the attached byssus threads. It is, of course, able by means of the muscles of its byssus to throw a strain on or slacken the byssus threads, independently of any pull which it may be making with its adhering foot.

The mussel may remain months without shifting out of the spot. Its track is sometimes in a circle, coming back to cross itself.

Lang mentions that the mussel is able to climb up a perpendicular wall by lifting itself by the foot and then making a thread fast.

The thread may be made while the foot is in any condition of extension or contraction; the length of the thread and its character various with that condition. From the position thus secured, and suspended by the thread now drawn tight by the byssus muscles, a further or a side position may be got for other threads. From this situation it may then climb a further stage.

A mussel formed a thread, that is, withdrew its foot and exposed a new thread, at 2 o'clock. At 2.23 it was noticed that the foot had been again extruded. By 2.25 a new thread was exposed. It had taken less than 25 minutes to make the thread.

The movement of the mussel was observed in different boxes in which mud accumulated, and it was also noticed in some mussels that were on a floating tray. The latter were covered in part with filamentous algæ.

Figs. 70–80 represent periodic drawings of a mussel and its byssus threads from the time it was put into a clean aquarium by itself. The fæces was kept clear of it by being removed each day for the first month or so. During the first night it had put its foot out in every direction, and had cleared away the thin layer of mud, leaving an impress of the positions that its foot had taken up. It had made only three threads.

Its changes in position were watched from April till July; during this time it shifted its position slightly now and then. It began to move in the beginning of May; at the end of the month the excreta had accumulated near the inhalent aperture and the mussel had slewed round to the right to a position at right angles to its original one. The following day it had gone back to the left.

On June 18 the mussel was now enveloped in a growth of algæ, and it had turned right round in the same spot, after breaking some of the threads. On July 4 it occupied the position shown in fig. 80. It has moved away a little, having thrown off two byssi that represent temporary positions. On July 11 some algoid filaments were attached to the shell near the edge, and the inhalent aperture was only opened a little. The shells were separated, but the aperture was closed by the frills. It had broken free and moved off a little way by July 13. On July 15 it was over to the right, having made two small byssi tracks, and on the following day it was found over to the left. Its shells were hardly open;

the algæ were tending to retain the fæces in close proximity to the mussel.

Several of the mussels, though set originally on the bottom, climbed up the sides.

Mussels, if placed on their back in water, very soon turn back up, usually within 24 hours. Some mussels, 2½ inches long, were put on the bottom of a box filled with water, with the hinge down. Certain of them showed some activity in turning back up; they had done so by next day. They put out the foot, round the shell and down to the bottom of the box, and, taking hold with the tip of the foot, they pull themselves round till they lie back up. One moved a good bit out of the run of the current which ran over the bottom of the box. Others attached themselves where they happened to have been set down. On July 12 one in a glass aquarium had not yet succeeded in turning over. It attached some threads to its own shell, and a few days later some threads were fastened to the bottom. A day or two after it was seen to be back up. It had been back down for nine days.

Some mussels were put into a box, and 18 hours afterwards they were all attached by byssus threads. Another rose up on end and attached itself with a large number of threads in the same time (fig. 81).

Mussels Trying to Keep in the Water by Slackening the Byssus.—Some small mussels, about 1¼ inches long, were attached up on the side of a box filled with water. When the water was being let out the mussels, as they were being left by the water, slackened their byssi (fig. 82) in order to keep themselves in the water; but when, having come to the end of their tether, they found the water still receding, they hauled in again and lifted themselves up tight against the side of the box (fig. 83.)

Movement of the Modiolus modiolus.—On March 22 some Modiolus were put into a tank. They were very slow in attaching themselves. By April 4th one of them had attached itself by some very long threads, had cast its byssus and re-attached itself. Later, there were several of these cast byssi, some of them having only a few hairs. The Modiolus therefore appears to behave exactly similarly in the matter of movement to the *Mytilus edulis.* It does not appear to be so active, however.

The Anatomy of the Byssus and Foot.

The most important publication on the subject of the byssus with which I am acquainted is Tullberg's. He gives drawings of sections of the byssus-pit and foot, and also of the septa of the pit and various glandular elements. From Tullberg's extracts it is clear that Müller's theory regarding the mode of formation of the byssus is wrong, in parts at least, as Tullberg maintains. I have not been able to consult Reichel's paper, "Ueber die Bildung des Byssus der Lamellibranchiaten, *Zool. Beiträge, Schneider.* 2 Bd., 1888."

Lang summarises the description thus:—"The byssus can generally be thrown off or replaced by a new one, and many forms can move about on a smooth perpendicular pane of glass by means of alternate attachment and rejection of portions of the byssus applied by means of the foot. [It is doubtful if a portion of the byssus can be rejected, unless merely the snapping of threads is here meant by the expression.] The byssus cavity is divided into narrow shelves by numerous folds which project from each side into its lumer. A septum descending from its roof further divides it into two lateral parts. The byssus secretion is yielded partly by the cells of the epithelial walls, partly by the glandular cells which lie in the surrounding tissue, their ducts passing between the epithelial cells. The secretion takes the form of the cavity, and is thus held fast as with roots by the numerous lamellæ which occupy the shelves. As the amount of the secretion in the cavity increases these lamellæ are pressed into the duct, where they unite to form the main stem of the byssus. When a bivalve attaches itself it forms a bysses thread in the groove [of the foot] which fuses with the end of the main stem."

Tullberg says that the groove of the foot, the side of the byssus-pit, and the septa are clothed with cilia. These I have not been able to see. Tullberg throws doubt on Sabatier's observation that the middle vessel of the foot opened to the exterior in the depression at the end of the groove. I have been able to confirm this. Tullberg describes at length and discusses the function of the main gland-masses present in the foot. The main gland is white (yellow from outside the foot); above it there is the green (or purple) gland, and on either side of the groove a less gland somewhat similar to the latter. He says that the walls of the byssus pit as well as all their sheaths are principally formed of connective tissue, to which the muscles which surround the pit are attached. In the connective tissue, and between adjacent parts of the muscle-bundles, are found glands similar in nature to the white gland of the foot, although they are separated a little more from one another. The root of the byssus consists of a multitude of thin structureless lamellæ, one in each compartment. They can be easily split into threads. They are folded in many plaits, where the byssus pit narrows to form a neck. He divides the lamellæ into primary and secondary lamellæ. The septa in the hind part of the pit end sooner than in the other parts, and the lamellæ, according to Tullberg, are enveloped by the lamellæ from the front part of the pit, forming an outer binding rind to the byssus stem. In section this is seen to be composed of concentric rings. Each of the byssus threads is attached to one of the above-mentioned concentric layers, and appears to be formed simultaneously. I do not agree with this, as is shown below. No part of the lamellæ takes part in the formation of the thread. Tullberg says that the thread appears to consist of a quite homogeneous substance, although in sections the surface stains differently with carmine than does the internal part. But this may be due to the outer surface having been acted on by sea water, not to any difference in origin and quality. The thread splits up into fine threads, just as do the lamellæ and the stem. Müller had described seven openings from the foot-gland into the end depression. Tullberg found one only. I have observed a number of slits in the floor of the depression, but I did not make out their connection to any gland. The lamellæ grow through the flow of secretion. He says that it is possible that the secretion of the green gland may be used to coat the thread with a fine skin.

I have examined the structure of the byssus and the foot. My results are in general agreement with those of Tullberg, except in one or two points. For example, I do not agree that there is any enveloping rind to the stem such as he describes. The base of each thread forms such an envelope, and, where the threads have been made one after the other in rapid succession, a thick rind is formed by their overlapping bases. On those parts of the stem where there are no hairs attached there is no rind.

I will discuss the structure of the foot first, then the byssus-pit and finally the thread and its formation.

FOOT (figs. 3. 43, 45, 60).—The foot is a brown or purple-coloured organ. It is very muscular, capable of retraction into a small body, as is seen in a dead mussel, or extended into a long narrow band, as is the case when the animal is forming a thread or dragging itself along by means of it (fig. 43). The tip of the foot differs from the remainder of the organ. It is possessed of a sucker property by which it can take firm hold of any hard foreign object. On the under surface of the foot there is a groove (fig. 42) continuous with the byssus pit (by-p) proximally, and distally opening out into a broad heart-shaped depression (de), a little short of the extremity of the foot. The tip of the foot, that is, the part including and beyond or distal to this depression, has the power of making vermiform movements, even after the foot is cut out of the mussel. The whole of this tip, including the depression, acts as the sucker. The depression is simply a widening out of the groove, to vanish gradually distally.

The groove (fig. 42) consists of two cushion-like lips (l) and a narrow inner part, which is closed in by the cushion lips to form a tube in which the thread is moulded.

The sides of the groove and its lips are crenate and vertically laminate. When the foot is contracted the groove is a sinuous line, but the more the foot is extended the straighter the groove and the smoother the sides become.

The foot is a mass of muscles and glands. On the outside the skin is longitudinally grooved, and when contracted it is circularly grooved. The muscles of the foot enter it at its distal end and proceed right along the foot to the tip, and are inserted all along the skin of the whole of the foot on every side, in big bundles along the upper side and edges, single fibres into the glandular areas. The only part where they do not appear to reach the skin is the groove. They go to the lips of the groove. The muscles are in bundles of various size, and between the bundles there are lacunæ, which give in cross section a spongy structure, except in the glandular area.

When the under surface of the foot is examined, it is seen that a yellow-coloured band (y-g) borders the groove on either side, and is continued right round the byssus-pit (fig. 45). This is the series of glands which supply the secretion that forms the thread. There is a separate gland to supply the depression in which the button that attaches the thread to a foreign body is formed. This end gland (the purple gland) appears to be different from the other, but that is possibly due merely to it being differently set in the foot to supply this altered part of the groove.

Transverse Section of the Foot. (Fig. 51.)

In the transverse section there are shown first the groove, its cushion lips, and on either side granular areas, viz., white glands, yellow when seen from outside (y-g). The remainder of the section is taken up with muscle bundles cut across (m), the so-called green (or purple violet) glands (p-g) (fig. 55) and the vessels, of which three are prominent—a median (m-v) and two lateral (l-v).

The Skin.—The skin forms a rind of varying thickness; it is especially thick at the edge of the foot. Outside there is a thin clear layer, the cuticle (ct) present all round except in the groove (fig. 54); it is present on the lips of the same. Next that layer comes the pigment layer, which is formed of large columnar cells (cl) containing more or less pigment; they are mottled with brown or violet colouring matter. The columnar cells vary in size in different parts. Next the columnar cells there is a fairly thick layer consisting of what resembles circular muscles. On the inside of the rind come the longitudinal muscle bundles (m) that are inserted into the skin in rows, which, when the skin is separated, show as ridges (fig. 39). The space between these ridges is occupied by glands (g).

The large white glandular area surrounding the groove on three sides is that which was indicated on the outside of the foot by the yellow band. When cut into there issued a copious, finely granular fluid that coagulates soon. The white gland is laminated in structure, although its connective tissue seems practically solid. It teazes into stringy material. Muscles run longitudinally through the white gland (m, fig. 51). Next the side of the groove a part of the glandular area is distinguished from the rest by a slight difference of colour. It consists apparently largely of oblique muscular fibres with glandular tissue (m and g). The longitudinal muscles of the foot give off fibres to the glandular area. The skin at the lip of the groove is thin and is connected by fibres to the white gland.

The Muscles.—Between the large glands and the skin are the longitudinal muscle bundles, inserted into the skin and giving off fibres to the glandular parts. There are also oblique muscles on either side of the lip of the groove (m and g). Associated with them can be seen some violet pigment.

The longitudinal muscles consist of two main median muscles and a lateral on either side. Large lacunæ are to be seen opening between the muscle bundles. There are glands associated with the muscle bundles and fibres

The Vessels.—The median vessel occupies a position between the two median groups of muscles, and is flanked also by the so-called green glands. This vessel opens to the depression at the end of the groove, as Sabatier maintained. It continues past the opening for a little distance into the tip of the foot. Each lateral vessel is associated with a lateral muscle.

Green or Purple Gland.—The green (or purple) gland is situated above the main glandular area. There are muscles in this gland. An apparent vessel which was noted by Tullberg was also seen. It was dark violet in colour, and showed its centre a deep violet. The muscles of the gland are inserted in sheaths into the lower surface of the foot beyond the white glands. This gland is much bigger than the white gland near the end depression of the groove. The glandular tissue next the gland is mottled lightly violet, and the muscle fibres have a slight violet tinge. Fig. 55 shows an element of the purple gland.

The Groove.—I found no cilia in the groove. In the section I saw a hair sticking out from the side, but it appeared to be merely a thread of the secretion, which had taken the shape of the opening of the duct from which it issued. The secreting region in section shows a mass of little tubes (secs, fig. 55). The cushion lips show an outside cuticle.

Longitudinal Section.

In longitudinal section it is seen that the muscles gradually taper from the proximal part to the distal; that is due to the fibres being gradually inserted into the skin.

The white gland is seen to be smaller in the proximal part than distally.

The Byssus Pit.

The byssus issues from the proximal extremity of the groove in the foot. If the byssus pit and the foot be dissected away from the remainder of the mussel the relationship of the parts is more readily seen. (Figs. 45 and 60.)

The neck of the pit grips the stem of the byssus tightly; it is formed by the continuation of the side of the groove of the foot. The neck has a soft collar which is everted when a strong pull is made on the byssus, and which is smooth on its inner surface (i-c and i'c, fig. 46).

Muscles.—The byssus pit is supplied with two sets of muscles, one set arising near the hinge from the surface of each half-shell. If the two sets of muscles be torn apart, and the separation assisted by a knife, the pit will be split into halves, and so will the byssus stem; the pit is bilaterally symmetrical (fig. 63). One group of muscles occupies a position where it gives off fibres to the outside of both halves of the pit. Between the muscles are crowded large masses of yellow glands (g, fig. 23).

The foot and the byssus pit are not strongly bound together, the only connecting part being the neck of the pit. The neck does not belong to the pit; it belongs to the foot. The relation of the pit and the foot is expressed thus—that the byssus stem passes through the groove of the foot at its proximal closed end (fig. 42).

Septa.—The pit itself is roughly pear-shaped, the byssus-stem forming the stalk (fig. 37). It is divided vertically by thin septa into a great number of slit-like loculi, set parallel with the median vertical longitudinal plane of the mussel. The septa are flat in their greater extent, but inferiorly they are curved in a slight spiral as they go to join the byssus stem. This condition is shown diagrammatically in fig. 95. When the pit is split into two as above, some of the septa are cut across. Each muscle is inserted across all the septa in its own half of the pit; *i.e.*, each septum gets some strands of each muscle.

A septum was dissected off (fig. 34). It is striated in texture, and is transversely ridged. The ridges are mostly developed on the lower half; towards the upper limit they disappear. Some of the fibres of the muscle on the outside of the pit come away with the septum; they are straight and have glands attached to them (g). The septum is attached firmly to the binding tissue uniting the insertions of the muscles. At one part of the outside of the pit the edges of the septa are free. The septum shows a tendency to split along a line between the insertion of two groups of muscles. In the upper narrow part of the septum the ridges crossing obliquely are in connection with the muscles inserted on one side.

In preserved specimens, killed in formalin, the ridges are very prominent, the septum being thrown into wave-like section. When dissected out of fresh specimens the septum is smooth, not ridged. It seems to be muscular. The septum is coated on either side by a thin gelatinous layer and it ends inferiorly in a clear, gelatinous, tapered tip. This tip teazes easily into strands. There is no sharp dividing line between the pit muscle and the septum. The septa are simply external continuations of the muscle fibres. The septum may thus be regarded as a sort of combination muscle or tendon, formed out of fibres from three main groups of muscles. This is shown diagrammatically in fig. 86.

The septum itself shows numerous small glands (g) scattered through it. The transparent part of the septum (tr) shows tubes in it.

Film (figs. 61 and 62).—Each loculus is occupied by a thin gelatinous film or lamella. It has the size and shape of the loculus and septum, and it tapers away into a thread-like termination inferiorly where, it unites with its fellows to form the byssus stem. Figs. 49 and 85 exhibit the structure diagrammatically.

The film very often comes away with the septum when it is dissected off, and if the septa are thrown into rugæ the film is similarly rugose; it is moulded between the two adjacent septa. Fig. 36 shows the longitudinal section of a ridged film.

It is striated longitudinally, and splits up readily longitudinally. It extends right to the limits of the loculus. It is difficult to get the film separated whole, as it is so thin, and readily splits. Moreover, it is thrown into a curve inferiorly, as the loculus is. The top end of the film is the thinnest part. That means that the loculus is slightly wedge-shaped. The edge of the film is all thready, as if in separating it fibres had been broken that connected it to the glands round the edge of the loculus. The film is lightly reticulated, but the main rows of striæ run longitudinally with cross wrinkles. The upper two-thirds is all punctuated with dots, and it is whitish to the naked eye, while the lower termination is clear and marked by parallel striation (fig. 62). Round the outer rind of the pit are situated among the muscle fibres, the glands which supply the secretion which forms the film.

When the byssus is drawn out of a fresh mussel the films are whitish and they stick together, *i.e.*, they are more or less in a plastic condition. In preserved mussels the film is hard, transparent; the byssus cannot, as a rule, be drawn out of preserved mussels. The septa are contracted and thrown into ridges, which serve to hold the films fast. In the fresh mussel they often slide out easily.

The sheath of the muscle includes a film-like tissue resembling the above film, and both are probably derived from similar glands

A mussel which had been opened, its adductor muscle being cut, had some of the threads of its byssus attached to its own shell. It was seen to be exerting a strain on the byssus. Part of the white portion of the stem was drawn out of the pit, and the inner soft collar of the neck was everted. The byssus root came gradually out, drawing a final thread of adhesive matter with it. This thread was sticky and connected the root still to the pit. Under the microscope it was seen to be rather granular. The root was bathed in a similar fluid. The soft transparent films were crumpled, but not regularly cross-barred, as in those mussels killed in formaline.

The force exerted on the muscles and on the pit when the byssus root was withdrawn will cause a copious outflow of the secretion from the glands into the loculi. It will lubricate the films in the passage out, and fill the loculi with secretion, which will be moulded into new films.

The films grow, and that process seems to take place as follows:—Round the edge of the loculus the ducts pour out their secretion in a semi-fluid condition as threads. These are moulded in the loculus into a flat sheet, but the film shows its thread formation even in the hard condition. The growth of the byssus may be due to successive pulls upon it, which will result in drawing out the films a little, when the secretion from the glands will pour out to a similar extent, so that the threads which form the film retain their connection by plastic threads right into the gland ducts. In the loculus the film hardens, but does not do so completely, except at its lower extremity, when it comes out into the neck of the pit.

The films thus retain a continuous connection down through the stem of the byssus, and also above with the glands.

The gelatinous termination of the septum dips down between the thread-like terminations of the films as they leave the loculi, and in the neck of the pit the films are moulded tightly into a rod-like stem of the byssus.

It is possible that there is poured out from the ends of the septa a secretion that serves to bind the films together into the byssus stem.

The thin outer skin that clothes the septum on both sides is in its nature similar to the film. In one case pieces of this outer clear layer were bearing what looked like little short fibrillæ.

I made out no cilia on the septum, nor in the neck of the byssus-pit.

Byssus stem.

The byssus stem is a bundle of longitudinal plaited fibres. It is of slightly greater diameter at the proximal end than distally. The byssus stem grows independently of the formation of the threads. The growth may be simply due to continued small pulls which the muscles exert on the byssus thread.

When a thread is being formed the foot of the mussel is extended, and its tip having the depression is attached to the object. In this position the groove is closed on every side. The byssus stem passes through it. The secreting surface of small ducts surrounds the stem, and the secretion that is poured out fills the groove, surrounds the stem, and fills up the depression. Now from the short time which is required to make a thread, it is evident that some special force is used to drive the secretion out until it fills the whole groove, neck of pit, and depression. This may be attained by the distension with fluid of the lacunæ between the muscles in the foot. And the internal pressure may be relieved by the issue of the fluid from the median vessel into the depression. This will relieve the sucker and permit of water getting into the groove in the foot. The water would tend to harden the thread. This seems to me to be *modus* of the formation of the thread. In some cases parts of threads are found in the groove of the foot. Some sticky material that had a thread formation was drawn out of the depression at the end of the groove, and it was connected by a thread to what looked like a pore at one side. It stuck to the glass. Under the microscope it was seen to be formed of longitudinal fibres and moulded externally with a crenate edge.

The complete thread (fig. 53) is flattened laterally in its proximal half and is rounder at its distal half. It appears to be made in layers laid one on top of the other. The part of the thread inside the mussel remains pale, that outside grows yellow and finally black. Owing to being flattened the thread shows a core very distinctly in its proximal part. Each layer is corrugated as it is laid on. This layer formation is probably due to the distention of the foot being exerted intermittently at short intervals. The external corrugations on the thread depend on the extent to which the foot is extended. The thread is crossed by fine lines in its whole course. These probably represent rows of gland openings or the division between. I think it is probable that the secretion is pressed out of the ducts in little semi-plastic threads at right angles into the grooves. There they are moulded by the sides of the groove, the complete thread being built up of several layers. The buttons at the ends of the thread were seen in one case to be tinged with violet.

The proximal end of the thread is in the form of a ring round the stem (fig. 57).

When the threads have been laid on in rapid succession a longitudinal section of the stem there shows the bases of the thread overlapping like a series of steps (fig. 52).

The threads may be made so quickly one after the other that the bases overlap and increase the thickness of the stem very much (fig. *ib.*).

In other cases the interval between the formation of the two threads has been such that the stem of the byssus had grown in the interval (fig. 57). The attachment made by the disc to a clear surface, *e.g.*, glass, is very strong The foot of the mussel seems to a certain extent to clean the surface to which the button is to adhere.

Occasionally the thread breaks as soon as it is formed; sometimes the button alone is seen sticking to the object. Threads may be broken by the muscles putting too great a pull on them. The adherent discs may loosen their holds. A byssus often contains many black threads carrying their discs that had been pulled away from their points of attachment.

Finally, if the discs are firmly attached, and they generally stick well if lately formed, the mussel can, when it desires to go, draw out the byssus by its roots. Where the stem grows much the threads will become so much the longer, and the mussel may no longer be able to put a tight strain on them. It will then probably form new threads upon which it can exert a strain.

The stem and the thread are formed independently of one another. The former is composed of the fibres from the byssus pit, possibly glued together by secretion from the tips of the septa, while they are moulded into shape by the neck of the pit. The mussel very often attaches some of the threads to its own shell. One advantage which this may have will be to tend to lessen the rocking of the mussel.

A curious condition happened in the case of one mussel. It had attached some of its byssus threads to the bottom of the tank and some to its own shell. It drew out the byssus by its roots, and moved off, but was checked at a little distance by the byssus thread attached to the shell (fig. 69). It, however, when found, had formed new byssus threads on its new situation. Later on it snapped the threads that detained it; they were four in number, and together must have made a fairly strong combination.

The Formation of a new Byssus Stem.

The rudiment of a new byssus stem is formed by the old root as it is being drawn out. When the films forming the root slip out of the loculi a secretion is poured out by the glands and this secretion accompanies the film outside, and is drawn out of the pit in a thickish thread. The remains of this may be seen attached to cast byssi. The loculi are now full of secretion that will be moulded into films. And this little thread of secretion that is left sticking out in the neck of the byssus pit, and which is continous with that in the loculi, is sufficient for the mussel to attach a thread to. It will harden at once. This is especially well seen in the byssus tracks where the mussel has simply formed a few threads, and then cast its byssus completely. Fig. 50 shows the formation of threads on a new byssus. Very soon the byssus grows, increasing rapidly to its normal thickness.

The beginning of the stem is shown at (b), and the gradual widening in diameter is shown by an optical section. The root is marked thus (v), and the threads by the letter (t).

The withdrawal of the films seems simply to open the ducts of the glands, and give their secretion free exit. Then by filling the loculus with secretion they seal themselves.

Except for the bases of the threads no rind is found to the stem. There appears to be a sort of outer skin, but it may be simply the flattening of plastered films.

In some cross sections of the byssus stem a cavity was shown in the centre.

The byssus stem probably grows through the strain put on it by the muscles drawing it out bit by bit.

GROWTH OF THE SPOUT-FISH *(Solen siliqua.)*

Several stages of the spout-fish have been kindly sent by Mr. Wm. MacBride, jr., Pirnmill. They were collected on April 30th.

They are readily sorted into 5 groups, viz., (1) in which the shells measured in length $4\frac{1}{4}$, $4\frac{3}{4}$, and $4\frac{7}{8}$ inches (figs. 87 and 88); (2) having shells $5\frac{1}{2}$ and $5\frac{3}{4}$ inches long (fig. 89); (3) $6\frac{1}{2}$, $6\frac{1}{2}$, $6\frac{3}{8}$ inches long fig. 90); (4) 7, 7, $7\frac{1}{8}$, $7\frac{1}{8}$ inches long (fig. 91); (5) 8, 8 inches long (fig. 92).

Two pairs of shells showed a different breadth to practical equality of length, *e.g.* (*a*) $6\frac{3}{8}$ by 1 inches, $6\frac{1}{2}$ by $1\frac{1}{16}$ inches; and (*b*) 7 by 1 inches, and $7\frac{1}{8}$ by $1\frac{1}{8}$ inches.

A specimen of what is probably *Solen siliqua*, var. *arcuata*, measured $5\frac{5}{8}$ inches in length. It is markedly curved. Mr. MacBride informs me that this form is not got of a larger size.

Another specimen, measuring $7\frac{5}{8}$ inches, had a slight bend on the posterior end of the shell. It may be a variety. It is probable that the samples given represent year groups; but the crux of the question is in deciding the age of the first group. Mr. MacBride regards the first three groups as representing one, two, and three years old respectively. It is probable that spoutfish living in the sand will grow fairly regularly in any one locality.

Except for the age of the first group, which seems to me to likely exceed one year, the interpretation of the other groups as representatives of consecutive year-groups seems to be correct.

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EXPLANATION OF PLATES.

PLATE XVI.

Fig. 1. Two-years old mussel, St. Andrews. March. *Nat. size.*

,, 2. ,, ,, ,, ,, ,, ,,

,, 3. Mussel opened to show the relation of the foot (f) and byssus (by).

,, 4. Three-years old mussel, St. Andrews. March. *Nat. size.*

,, 5. ,, ,, ,, ,, ,, ,,

,, 6. Ripe Egg of Faroe mussel, *Cam. luc.* Obj. DD: Oc. 2, Zeiss.

,, 7. Egg of Faroe mussel.

,, 8. ,, ,, at 1 p.m., June 3rd.

,, 9. Section of byssus-pit showing glands (g).

,, 10. Egg of Faroe mussel at 10.30 a.m., June 4.

,, 11. ,, ,, ,, ,,

,, 12. Nearly ripe egg of mussel, removed from the mantle. July 1 .

,, 13. Egg of Faroe mussel at 10.30 a.m., June 4.

,, 14 and 15. Eggs at 3 p.m. June 3. The yolk contents have been squeezed out, leaving real or apparent nuclei.

,, 16. Unfertilized egg of Faroe mussel: budding.

,, 17. Egg of Faroe mussel at 1 p.m., June 3rd.

,, 18. ,, ,, ,, ,,

,, 19. Enlarged drawing of process from the micropyle of the egg shown in Fig. 18.

,, 20. Egg of Faroe mussel at 10.30 a.m., June 4.

,, 21. ,, ,, ,, ,,

,, 22. ,, ,, ,, ,,

,, 23. Longitudinal section of byssus-pit and foot, showing muscles (m), glands (g), septum (sep), groove (gr), byssus (by), foot (f).

,, 24. Sperm of mussel.

,, 25. Egg of Faroe mussel at 7 p.m., June 3.

,, 26. Bean-shaped slow-growing mussel, which had been kept for two years in Laboratory. Side view. *Nat. size.*

,, 27. Bean-shaped slow-growing mussel, which had been kept for two years in Laboratory, view from above. *Nat. size.* Compare with Figs. 31 and 32.

,, 28. Egg of Faroe mussel at 3 p.m. June, 3.

,, 29. ,, ,, ,, ,, ,,

,, 30. ,, ,, ,, ,, ,,

,, 31. Broad mussel from pond, quick-growing, side view. *Nat. size.*

,, 32. ,, ,, ,, view from above. *Nat. size.* Compare with Figs. 26 and 27.

,, 33. Shows the evertible inner collar (i-c and i′c) of the byssus-pit, outer collar (o-c), byssus (by).

,, 34. Septum from byssus-pit: glands (g). *Cam. luc.* Obj. *a* and Oc. 2, Zeiss.

,, 35. Egg of mussel nearly ripe, July. Part of the yolk contents has been pressed out. Nucleus (n).

,, 36. Diagrammatic longitudinal section of the film of root of bysus of a preserved mussel.

,, 37. Byssus-pit and byssus seen from the side. The skin and glands have been dissected off, and the edges of the septa exposed. Anterior side (ant), posterior side (post), muscle (m), septum (sep).

,, 38. Egg of Faroe mussel at 7 p.m. It has been burst; a "nucleus" remains inside the capsule, and a little collection of protoplasm is attached to the outside of the zona.

,, 39. Skin of foot seen from inside—showing the longitudinal muscle strands (m), and the glands (g) between them.

,, 40. Mussel which had a dark amber-coloured frill to the inhalent aperture (in), and a white exhalent aperture (ex).

,, 41. An apparent nucleus formed by the union of clear protoplasm and yolk granules, both of which had been pressed out of an egg.

,, 42. Groove of foot opened out to show the cushion lips (l), byssus (by), byssus-pit (by-p), and depression at end of the groove (de).

,, 43. Mussel that travelled actively by means of its foot (f) along on the level. *Nat. size.*

,, 44. Mussel (female) that spawned. *Nat. size.*

,, 45. Foot of mussel, showing yellow glands (y-g) that border the groove in its whole extent.

Fig. 46. View of outside of byssus-pit, showing the outer (o-c) and inner collars (i-c and i′c).

,, 47. Mussel that had a purple-coloured frill to the inhalent aperture (in), and a purple-coloured exhalent siphon (ex).

PLATE XVII.

Fig. 48. Byssus root (r), thread (t), shreds of secretion (sh).

,, 49. Diagram of the relation of septa (sep) and the films (f), root (r).

,, 50. Root of a new byssus showing the beginning of the byssus-stem (b) and the first threads laid on overlapping one another. The ragged edge of the bases of the first threads are seen at (r). *Cam. luc.* Obj. *a* and Oc. 2, Zeiss.

,, 51. Transverse section of the foot of the mussel—gland (g), yellow gland (y-g), purple gland (p-g), muscle (m), longitudinal muscle (l-m), median vessel (m-v), lateral vessel (l-v). (Fig. 55 shows an element of the purple gland.)

,, 52. Stem of byssus showing the formation of nodes by the overlapping of the bases of the threads (t), stem (st), root (r).

,, 53. Drawing of byssus thread—base of attachment to byssus-stem (b), disc for attachment to foreign body (d).

,, 54. Transverse section of the groove (gr) of the foot—cuticle (ct), columnar pigmented cells (c-l), purple-coloured glands (p-g), secreting surface (sec-s), secretion (sec). *Cam. luc.* Apoch. Obj. 8 mm., Oc. 2, Zeiss.

,, 55. Element of purple gland of foot. *Vide* Fig. 51.

,, 56. Mussel showing inhalent aperture (in) and exhalent siphon (ex) widely open. May, 1907.

,, 57 and 58. Byssus-stem (st) showing the attachment of the bases of threads (t). The bases overlap and are of one size. The stem has no rind. The root has apparently brought away some of the septa from the byssus-pit. *Cam. luc.* Obj. *a* and Oc. 2, Zeiss. (Another view of this byssus-stem is shown in Fig. 58.)

,, 59. Drawing to show the glands (g) which surround the byssus-pit, and in which the muscles (m) are embedded—foot (f).

,, 60. Longitudinal section through the byssus-pit and foot to show the connection of the median vessel (m-v) with the end depression of the groove (gr)—purple gland (p-g), yellow gland (y-g), muscle (m), septum (sep).

,, 61 and 62. Parts of film. *Cam. luc.* Obj. *a* and Oc. 2, Zeiss.

,, 61a. Egg of Faroe mussel at 10.30 a.m., June 4.

,, 63. Byssus-pit split longitudinally to show muscles (m), gland (g), byssus-pit (by-p), groove (gr), byssus stem (st).

,, 64. Diagram to show the relations of the films (f) and the tips of the septa (sep). The tips of the septa unite with the films, but they do not go far into the stem.

,, 65. Section of byssus-pit—position of byssus (by), collar of pit (c), groove (gr), film (f), septa (sep), posterior deep groove (d-gr), yellow gland (y-g), glandular tissue (g).

,, 66. Byssus pit laid open—groove of foot (gr), byssus (by), outer collar (o-c), inner collar (i-c).

PLATE XVIII.

Fig. 67. Track of mussel—discs without hairs (p).

,, 68. ,, ,,

,, 69. Mussel attached to glass by discarded byssus.

PLATE XIX.

Fig. 70–80. Successive drawings of the same mussel to show the formation of byssus-threads—disc without a hair (p).

,, 81. Drawing of a mussel that raised itself on end on the bottom of a box, and attached itself by numerous threads in 18 hours.

,, 82. Mussel with byssus slack.

,, 83. ,, ,, hauled tight.

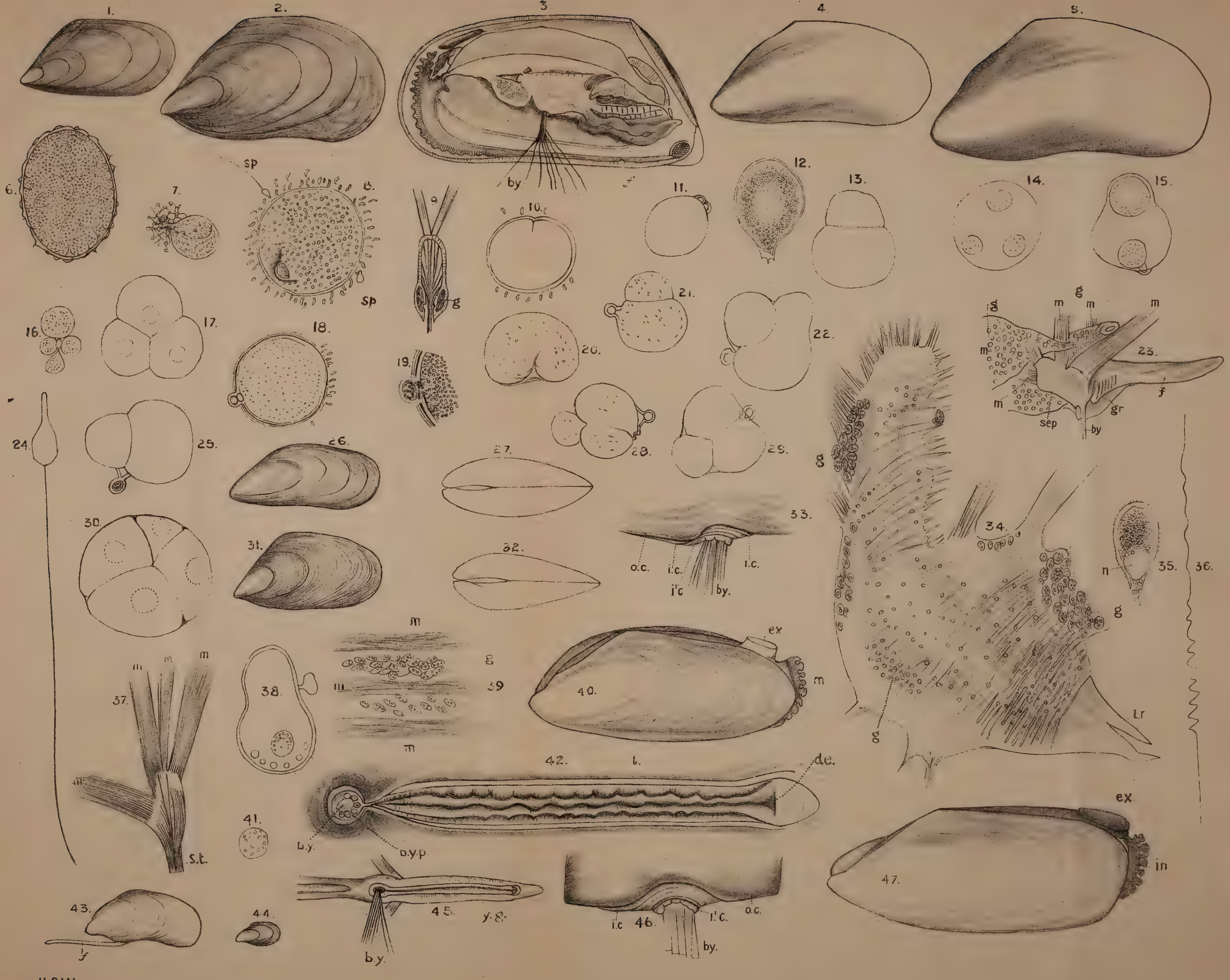
,, 84. Drawing of Faroe mussel showing heap of spawn at its round end—spawn (sp).

PLATE XX.

Fig. 85. Diagrammatic section of byssus-pit to show septa and films.

,, 86. Diagram to show the morphology of the septum, viz., that it is formed by the united tendons of three sets of muscles

PLATE XVI.



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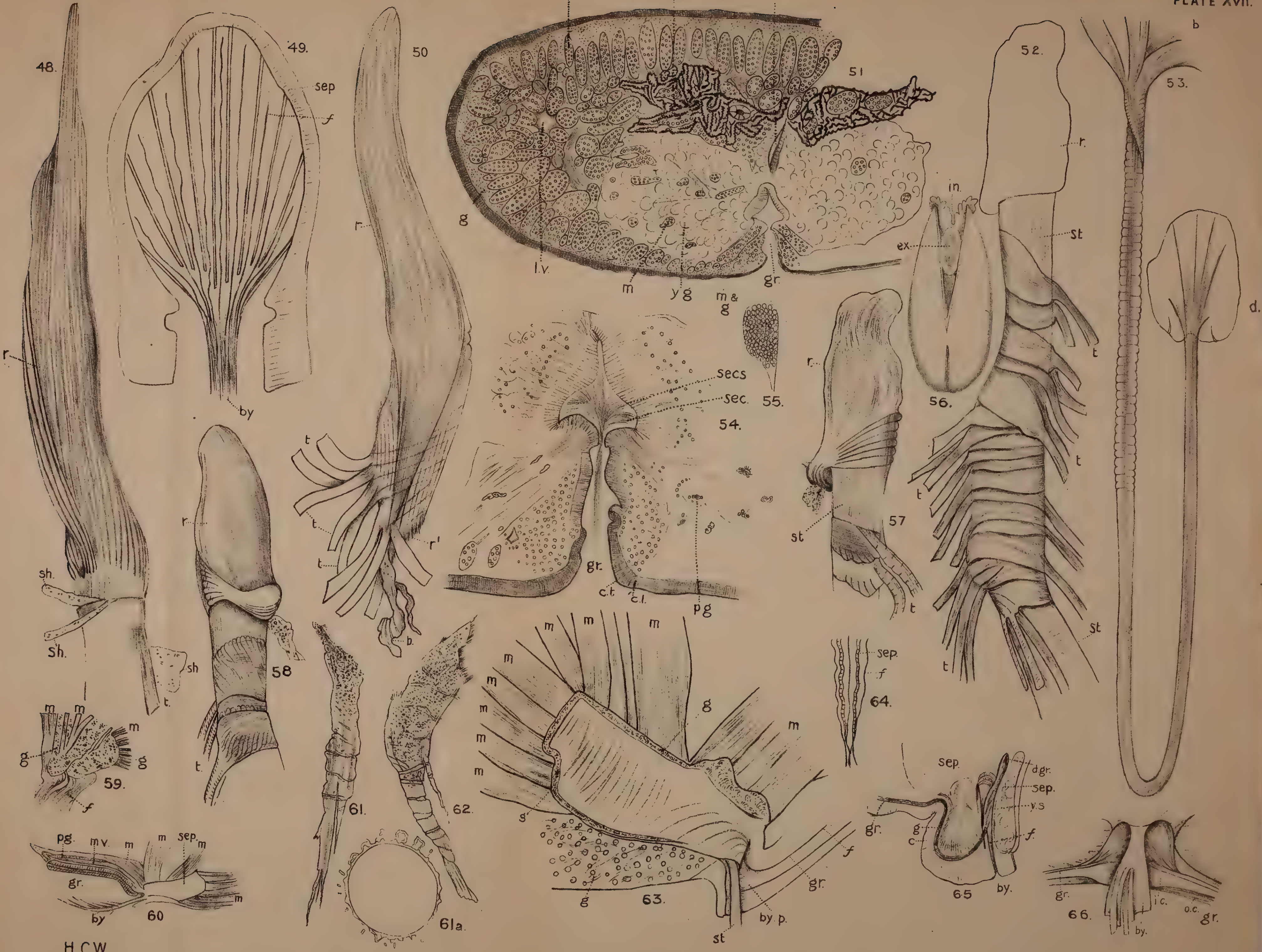
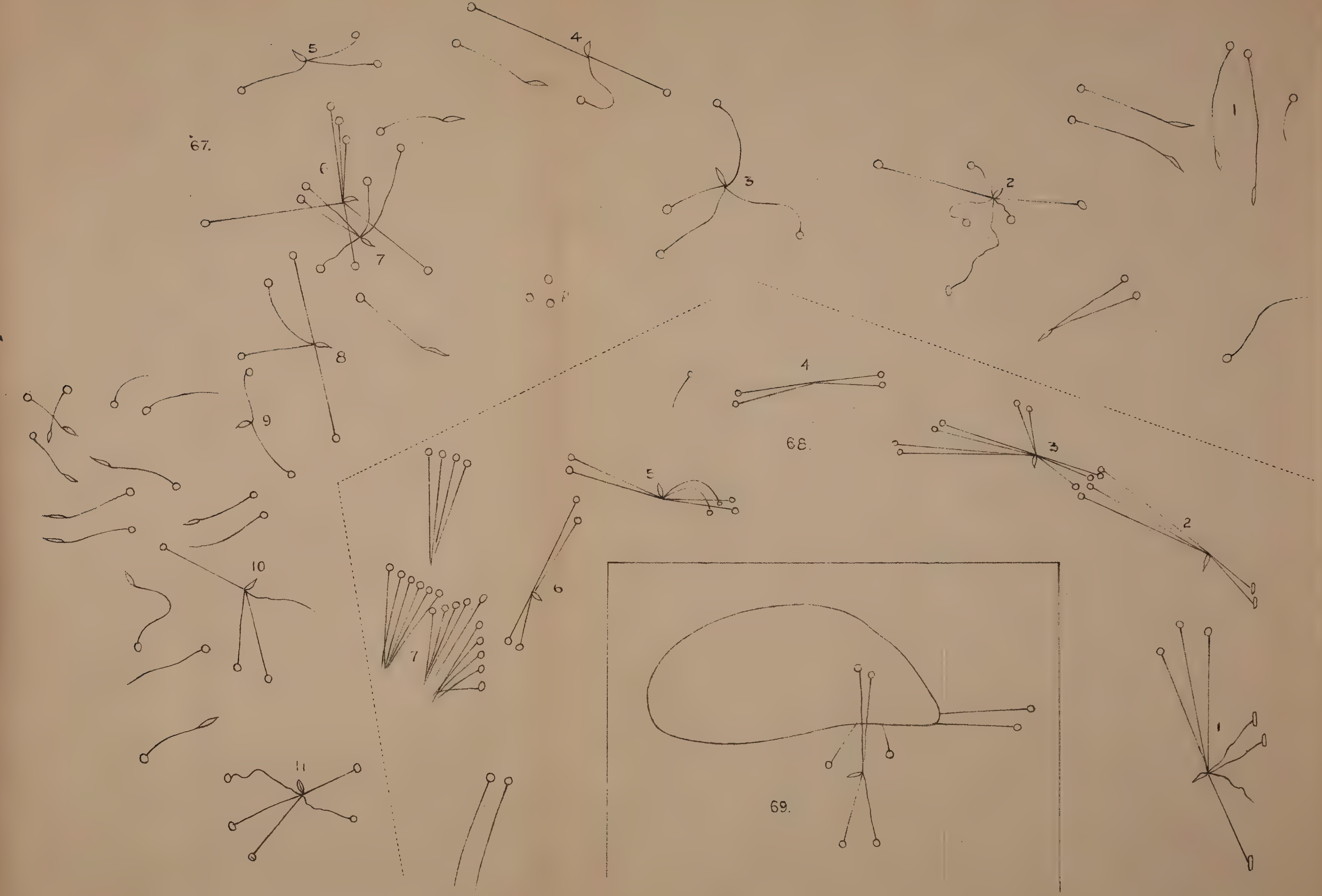
MYTILUS EDULIS.



Mytilus Edulis.



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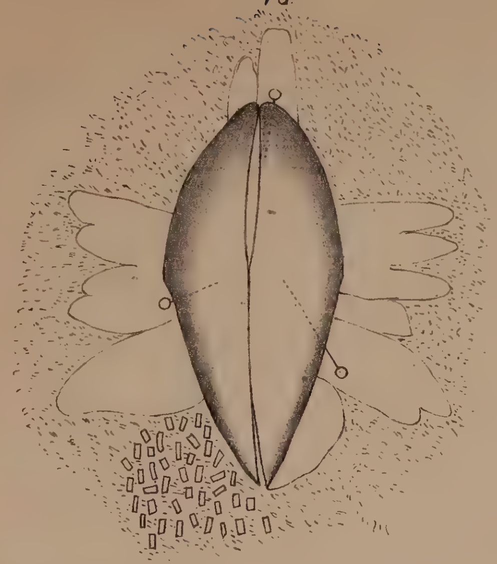
70.



April 14th

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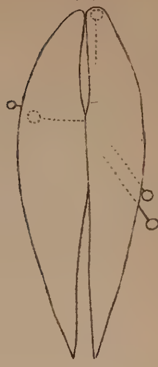

April 17th

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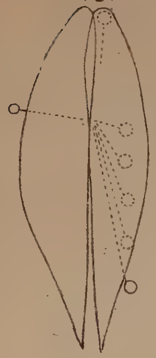

April 18th

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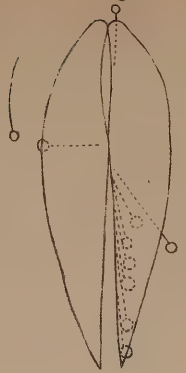

April 22nd

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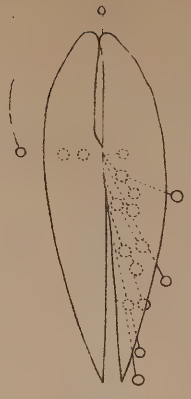

April 24th

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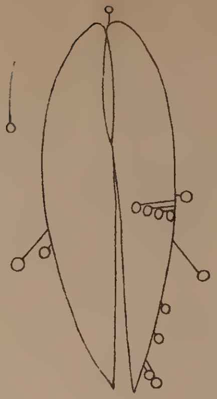
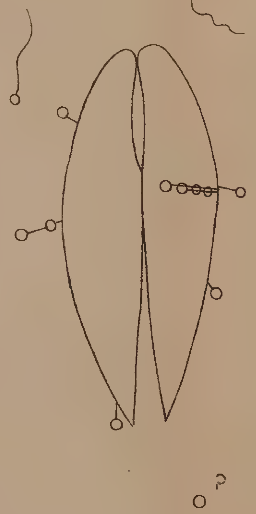
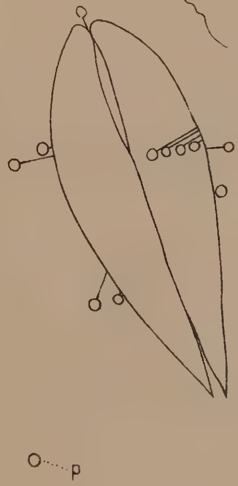


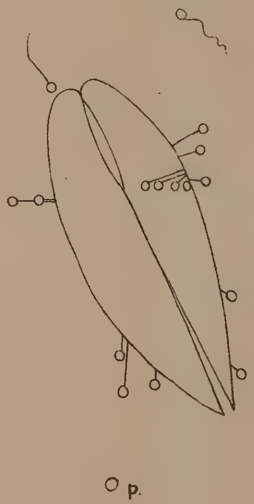
April 25th



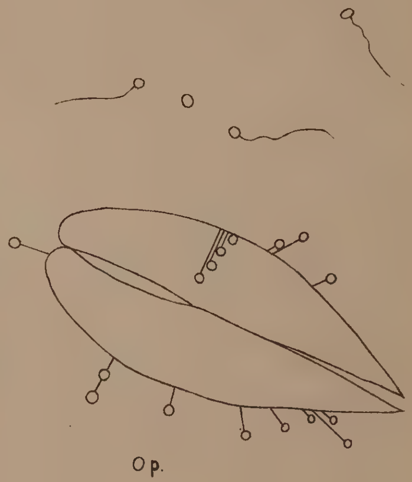
76. April 26th



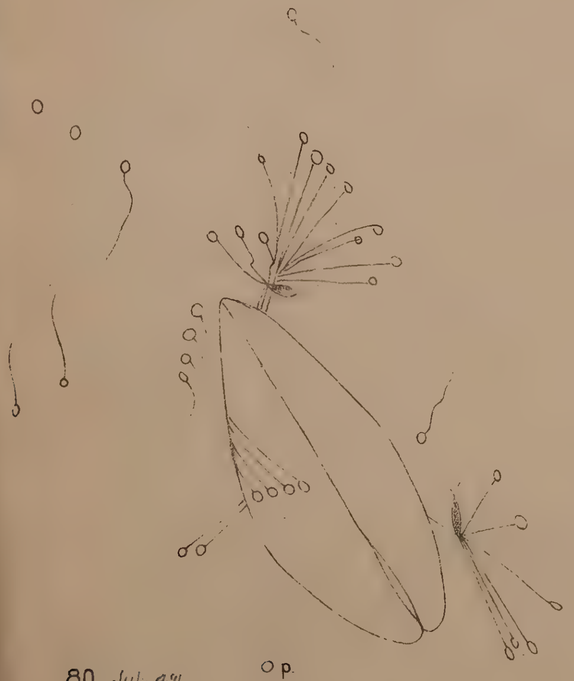
77. May 1st



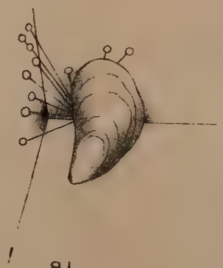
78. May 3rd



79. May 20th



80. July 4th



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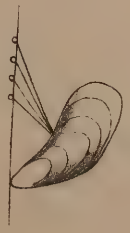

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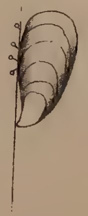

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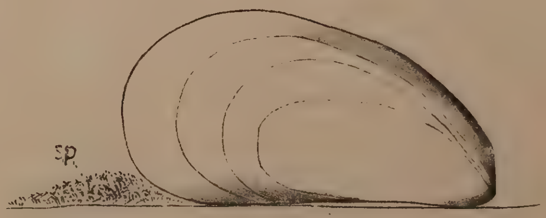
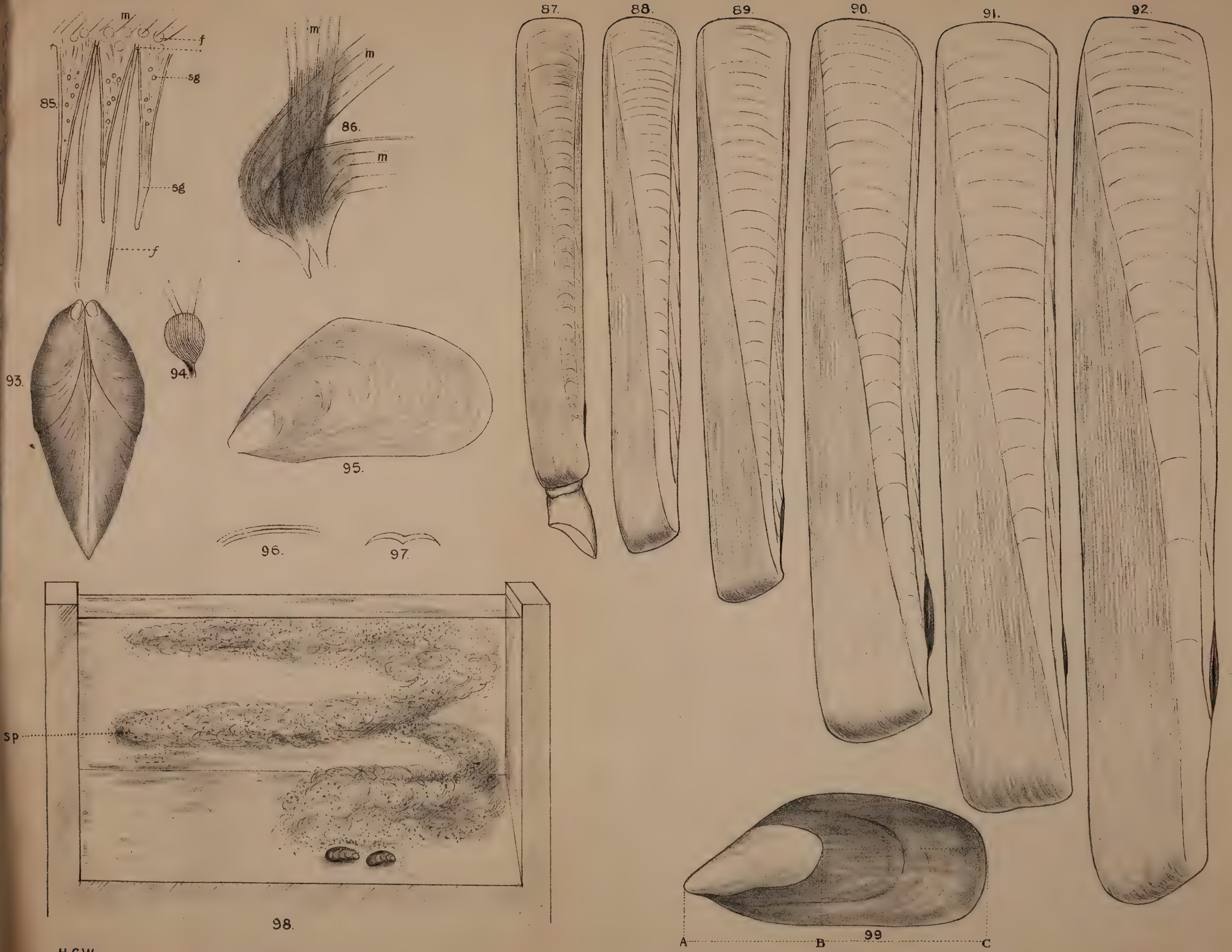


84.

H.C.W.

MYTILUS EDULIS.



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MYTILUS EDULIS, Figs. 85, 86, 93–97, 99: MODIOLUS MODIOLUS, Fig: 98: SOLEN SILIQUA, Figs 87–92.

FIG. 87. Spout-fish (*Solen siliqua*), *nat. size*—$4\frac{1}{4} \times \frac{3}{4}$ inch, April 30.
,, 88. ,, ,, ,, $4\frac{13}{16} \times \frac{1}{16}$,, ,,
,, 89. ,, ,, ,, $5\frac{3}{8} \times \frac{13}{16}$,, ,,
,, 90. ,, ,, ,, $6\frac{1}{2} \times 1\frac{1}{16}$,, ,,
,, 91. ,, ,, ,, $7\frac{1}{8} \times 1\frac{1}{8}$,, ,,
,, 92. ,, ,, ,, $8 \times 1\frac{1}{4}$,, ,,
,, 93. Drawing (natural size) of a mussel that had grown in the pond at Bay of Nigg. July 20, 1907. View from above.
,, 94. Diagrammatic median section of the byssus-pit.
,, 95. Side view of mussel shown in fig. 93.
,, 96. Drawing of excretum of mussel.
,, 97. ,, ,, ,, section.
,, 98. Drawing showing the cloud formed in tank by the discharge of sperms by two examples of the horse-mussel (*Modiolus modiolus*).
,, 99. Transplanted mussel. (St. Andrews.) A–B is the size of the original seed ; B–C is the increase after transplanting.

V.—REPORT ON THE OPERATIONS AT THE MARINE FISH HATCHERY, BAY OF NIGG, ABERDEEN, IN 1906. By Dr. T. Wemyss Fulton, F.R.S.E., Scientific Superintendent.

In the Annual Report for last year* an account was given of the arrangements at the hatchery and the alterations which had been made, together with a number of plates showing the hatchery, ponds, etc. It need only be said here that the adult plaice from which the spawn is obtained are confined in a large tidal pond, where they are kept throughout the year and fed on mussels. At the spawning season the eggs are shed into the water of the pond, from which they are collected by a large gauze net and transferred into the hatching apparatus. They are maintained in the apparatus until the young hatch out, the length of this period depending directly upon the temperature of the water. At the commencement of the spawning season, when the temperature of the water is low, the duration of the period of incubation is on the average about three weeks; at the end of the season, when the temperature has risen considerably, it occupies about a fortnight. The larval fishes, after they are hatched out, are kept in the apparatus for several days, until the yolk-sac is partly absorbed, and they are then placed in the sea.

It is estimated that, including both periods—the time of incubation of the eggs and the period during which the larvæ are retained—protection is conferred upon the eggs and larvæ for about half of the time that naturally elapses from the spawning of the eggs until the complete transformation of the larval fish, when the characteristic adult form and habit is assumed.

The success of the hatching operations depends very largely upon two circumstances—an adequate supply of eggs and a sufficient supply of pure water. In order to obtain a large supply of eggs it is necessary that the number of adult fishes in the spawning pond should be large. Hitherto the method adopted of obtaining the adult brood stock was as follows:—By the authority of the Board a steam trawler was permitted to trawl within the territorial waters, and more particularly within the Moray Firth and Aberdeen Bay. By an arrangement with the owners of the trawler and the skipper the hatchery attendant accompanied the vessel on such occasions, taking with him and fitting up on deck a number of large wooden tubs, through which a constant circulation of sea water was maintained by means of the donkey-pump. Into these tubs the plaice which were selected from the catches brought on board were placed, and when the vessel returned to Aberdeen they were transferred in tanks to the hatchery pond. The plaice required for the purposes of the hatchery were thus obtained gratis, the rest of the catch of fish being the property of the owners, and regarded by them as sufficient compensation for their trouble.

By the method described the stock of adult plaice at the hatchery has been maintained since the beginning of the work at Aberdeen, for although a large proportion of the stock of one season survives to the next, there is always a considerable loss which requires to be made up each year. Unfortunately, as mentioned in last Annual Report, the trawler which was engaged in this work at the beginning of December, 1905, was stranded in Aberdeen Bay, and owing to the loss of life occasioned thereby the Board have thought it right to refrain from making use of such vessels for inshore work. In consequence of this the stock was not renewed, and the supply of spawn, as mentioned

* *Twenty-third Annual Report*, Part III., p. 108.

below, was much under the supply in former years. Under present circumstances it is not possible to get supplies of living adult plaice from the ordinary commercial trawlers working in the North Sea. As a rule the quantity of plaice obtained by them from near grounds in any single voyage is small, and it would require many expeditions to obtain a sufficient number for the hatchery; and the fish would, moreover, have to be purchased at their market value, and the cost of this can scarcely be borne by the present vote for scientific investigations. It is only within the sandy bays near the shore that large quantities of plaice can be secured.

The eggs were first observed in the spawning pond last year at the beginning of February, which is later than usual, owing to the smaller number of adult fishes in the pond. The spawning gradually increased towards the end of the month, and, as usual, was greatest in March and in the early part of April, declining towards the end of the latter month, and ceasing in the early part of May, a few eggs being obtained on the 13th. The number of eggs obtained in each of the months was estimated to be:—February, 796,000; March, 3,320,000; April, 3,290,000; May, 80,000, making a total of 7,486,000. In the previous year the estimated number was 40,110,000, so that the decrease, for the reason mentioned, has been considerable.

The estimated number of fry which were hatched out and put into the sea was 4,406,000, the death-rate being thus equivalent to about 41 per cent., which is unusually high. The principal cause of this was the impurity of the water and a scarcely adequate supply, especially towards the end of March and the early part of April. Owing to the stormy weather there was sometimes difficulty in filtering the water properly; and it was found that the arrangement of the filtering apparatus in the re-built hatchery was defective, and the "head" of water was insufficient to furnish a plentiful supply. The fry were put into the sea off Girdleness and Aberdeen on five occasions—in March, April, and May, the last lot being set free on the 23rd of the latter month.

The temperature of the water varied from 1·5 C. (34·7 F.) to 10·7 C. (51·3 F.) during the hatching season. It was lowest in the early part of March. The specific gravity was under 27 on only six occasions; it was usually about 27·5–27·8, and the lowest was 26·6.

The number of the eggs of the plaice collected from the spawning pond and the number of fry hatched out are as follows in the different years at Bay of Nigg:—

	Eggs Collected.	Fry Hatched.
1900,	43,290,000	31,305,000
1901,	63,370,000	51,800,000
1902,	72,410,000	55,700,000
1903,	65,940,000	53,600,000
1904,	39,600,000	34,780,000
1905,	40,110,000	15,790,000
1906,	7,486,000	4,406,000
	332,206,000	247,381,000

It may be mentioned that the expense in connection with the hatching work is comparatively small, since it is carried on in conjunction with the Marine Laboratory, and without any additional staff. The total expenditure for extra coals, food for the fishes, etc., is estimated at under £80.

During the season the hatchery was visited by delegations of fishermen from the counties of Argyll, Bute, Caithness, and Elgin, under arrangements made with the various County Councils.

Table I.—Showing the Daily Progress at the Hatchery, and the Temperature and Specific Gravity of the Water.

Date.	Eggs Collected.	Dead Eggs Removed.	In Pond.			In Hatchery.	
			Temperature.		Sp. Gr.	Temperature.	
			Cent.	Fahr.		Cent.	Fahr.
February 5	...	...	2·2	36·0	27·9	...	...
,, 6	...	...	2·6	36·7	27·8	...	...
,, 7	...	...	2·9	37·2	27·8	...	...
,, 8	...	...	3·0	37·4	27·8	...	...
,, 9	7,000	...	...	...	...	...	...
,, 10	7,000	...	2·1	35·8	27·7	2·1	35·8
,, 11	...	...	...	...	...	...	...
,, 12	3,000	...	2·1	35·8	27·7	...	...
,, 13	...	...	2·1	35·8	27·8	...	...
,, 14	13,000	...	3·1	37·6	27·6	2·8	37·0
,, 15	...	...	2·7	36·9	27·7	...	...
,, 16	133,000	...	2·6	36·7	27·7	...	...
,, 17	13,000	...	2·2	36·0	27·7	...	...
,, 18	...	...	...	...	...	...	...
,, 19	80,000	10,000	3·2	37·8	27·7	...	...
,, 20	...	...	3·0	37·4	27·8	...	...
,, 21	100,000	20,000	2·2	36·0	27·7	...	...
,, 22	...	...	...	...	27·6	...	...
,, 23	110,000	...	2·7	36·9	27·8	2·2	36·0
,, 24	...	...	...	...	...	...	...
,, 25	...	...	...	...	...	...	...
,, 26	170,000	4,000	2·2	36·0	27·8	...	...
,, 27	...	...	...	...	...	...	...
,, 28	160,000	...	2·4	36·3	27·8	...	...
March 1	...	...	1·8	35·2	27·8	...	...
,, 2	160,000	...	1·5	34·7	27·8	1·3	34·3
,, 3	...	24,000	1·6	34·9	27·8	...	...
,, 4	...	...	...	...	...	...	...
,, 5	200,000	...	3·2	37·8	27·7	...	...
,, 6	...	...	4·0	39·2	27·6	5·2	41·4
,, 7	280,000	40,000	4·6	40·3	27·6	...	...
,, 8	...	140,000	4·6	40·3	27·6	...	...
,, 9	420,000	...	3·6	38·5	27·6	...	...
,, 10	...	...	3·0	37·4	27·7	...	...
,, 11	...	...	...	...	...	...	...
,, 12	...	40,000	...	...	...	...	...
,, 13	440,000	...	1·9	35·4	27·5	...	...
,, 14	480,000	80,000	1·6	34·9	27·7	...	...
,, 15	...	...	...	...	...	...	...
,, 16	240,000	88,000	2·5	36·5	27·6	...	...
,, 17	...	...	3·2	37·8	27·6	...	...
,, 18	...	...	...	...	...	...	...
,, 19	440,000	27,000	...	...	...	...	...
,, 20	...	...	4·5	40·1	27·6	...	...
, 21	260,000	40,000	...	...	...	...	...
,, 22	...	...	4·9	40·8	27·5	...	...
,, 23	...	...	5·2	41·4	27·3	...	...
,, 24	...	660,000	4·1	39·4	27·3	...	...
,, 25	...	...	...	...	...	...	...
,, 26	400,000	...	3·6	38·5	27·2	4·0	39·2
,, 27	...	...	3·6	38·5	27·0	...	...
,, 28	...	...	...	...	...	...	...

TABLE I.—*continued.*

Date.		Eggs Collected.	Dead Eggs Removed.	In Pond.			In Hatchery.	
				Temperature.		Sp. Gr.	Temperature.	
				Cent.	Fahr.		Cent.	Fahr.
March	29	...	240,000	4·0	39·2	27·0	...	...
,,	30	...	...	5·2	41·4	27·0	...	...
,,	31	...	...	5·2	41·4	27·0	...	...
April	1	...	...	...	...	...	...	...
,,	2	500,000	...	5·8	42·4	27·0	...	...
,,	3	...	187,000	...	...	...	...	...
,,	4	400,000	...	6·0	42·8	26·8	...	...
,,	5	...	520,000	6·0	42·8	27·1	...	...
,,	6	360,000	200,000	6·4	43·5	27·2	...	...
,,	7	...	...	...	...	...	...	...
,,	8	...	...	...	...	...	...	...
,,	9	280,000	130,000	...	...	...	...	...
,,	10	...	...	7·4	45·3	27·1	...	...
,,	11	100,000	...	8·0	46·4	27·1	...	...
,,	12	...	...	7·8	46·0	27·2	...	...
,,	13	420,000	...	...	...	...	. .	...
,,	14	. .	...	7·8	46·0	27·1	...	...
,,	15	...	...	...	...	...	...	...
,,	16	180,000	...	8·0	46·4	26·8	...	...
,,	17	...	...	7·4	45·3	27·0	...	..
,,	18	200,000	160,000	...	...	...	...	...
,,	19	...	90,000	7·2	44·9	27·0	...	...
,,	20	220,000	...	...	...	...	...	...
,,	21	...	...	7·3	45·1	27·2	...	...
,,	22	...	...	...	...	...	...	...
,,	23	440,000	...	6·7	44·1	27·4	...	...
,,	24	...	...	6·1	43·0	27·4	...	..
,,	25	80,000	...	6·1	43·0	27·5	...	...
,,	26	...	...	6·2	43·2	27·4	...	...
,,	27	60,000	180,000	6·8	44·2	27·4	...	...
,,	28	...	...	...	...	...	...	...
,,	29	...	...	...	...	...	...	...
,,	30	50,000	...	7·6	45·7	27·4	...	...
May	1	...	...	...	...	...	...	...
,,	2	40,000	...	7·9	46·2	27·6	...	...
,,	3	...	.	8·6	47·5	27·0	...	...
,,	4	26,000		9·3	48·7	26·8	...	...
,,	5	...	...	9·1	48·4	26·8	...	...
,,	6	...	...	9·0	48·2	27·2	...	...
,,	7	...	...	9·6	49·3	27·4	...	...
,,	8	12,000	...	10·7	51·3	27·3	...	...
,,	9	...	...	9·8	49·6	26·6	...	...
,,	10	...	200,000	...	...	...	...	...
,,	11	...	...	9·6	49·3	27·3	...	...
,,	12	...	...	9·7	49·5	27·2	...	...
,,	13	2,000	...	9·8	49·6	26·6	...	...
Totals,	-	7,486,000	3,080,000					

VI.—SOME OBSERVATIONS ON THE FOOD OF THE HERRING.

By Thomas Scott, LL.D., F.L.S., Mem. Soc. Zool. de France.

The organisms which constitute the food of the herring—their various kinds, their distribution, and their influence on the movements of the fish—have for a long time engaged the attention of students of marine natural history, and it is now many years since the Fishery Board for Scotland commenced investigations into the nature of the food of the herring and of various other problems connected with the herring fisheries of Scotland.

In 1885 an important paper on the food of the herring was contributed to the Fourth Annual Report of the Fishery Board for Scotland by the late George Brook, F.L S., in collaboration with Mr W. L. Calderwood, the present Inspector of Salmon Fisheries for Scotland. In this paper the results of the examination of between fourteen and fifteen hundred stomachs of herring containing food are given in detail in a Table which fills eighteen pages of the Report.

The stomachs had been received from various places all round Scotland, including the district of Berwick-on-Tweed, the Firths of Forth and Tay, Aberdeen, the Moray Firth District, Loch Broom, West Ross-shire, and the Firth of Clyde, including Loch Fyne. All these stomachs were such as contained food that could in most cases be identified. Many other stomachs had been examined, but as they proved to be empty or the food they contained was so disintegrated by the digestive fluids as to be undistinguishable, they were by the authors excluded from the paper in question.

The observations which follow, and which may be considered as supplementary to the paper by Brook and Calderwood, describe the results obtained from the examination of fully five hundred herrings' stomachs, selected from various fishing centres in Scotland. The Table appended contains a summarised statement of the number of stomachs and of the dates when they were examined, and also of the localities from whence they were sent.*

Table I.

Dates when the stomachs were examined.	Number of stomachs examined.	Localities whence the fish were sent.
December 1904	17	Loch Fyne.
February 1905	55	Loch Fyne, Loch Broom.
June ,,	122	Campbeltown, Loch Broom, Stornoway, Anstruther.
July ,,	93	Loch Fyne, Campbeltown, Stornoway.
August ,,	19	Kilbrennan Sound (Pirnmill).
September ,,	33	Loch Fyne, Carradale.
December ,,	38	Loch Fyne.
January 1906	31	Campbeltown.
September ,,	11	Loch Fyne.
October ,,	11	Loch Fyne.
November ,,	12	Loch Fyne, Shetland, Wick, Peterhead.
December ,,	11	Loch Fyne, Girvan, Rothesay.
January 1907	17	Clyde, Stornoway.
February ,,	19	Campbeltown, Rothesay, Stornoway.
March ,,	22	Campbeltown, Skipness, Stornoway.
April ,,	5	Skipness, Machrie Bay (Arran).

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* I desire to acknowledge the assistance I have received in this inquiry from my colleague, Dr. H. C. Williamson.

Rather more than half the number of stomachs examined were found to be empty or the food they contained could not be satisfactorily determined; fully forty-five per cent. of them were the stomachs of female fish, and fifty-two per cent. males; a few had their reproductive organs so immature that it was considered doubtful whether they were milters or spawners. Those found to contain food that could be identified numbered two hundred and forty-three. Of these stomachs about fifty-two and a half per cent. were those of female fishes, two were doubtful, and the others those of male fishes, as shown in the subjoined Table.

TABLE II.

TABLE showing the proportion of stomachs containing food and those containing no food that could be identified, the proportion of males to females, and the names of the districts from which they were sent.

Names of the Districts.	Stomachs containing Food.			Stomachs containing No Food.			Totals of ♀ and ♂ and ?			Total Number of the Stomachs Examined.
	♀	♂	?	♀	♂	?	♀	♂	?	
Loch Fyne - -	42	36	1	26	32	0	68	68	1	137 Stomachs
Clyde - - -	42	41	1	41	48	4	83	89	5	177 ,,
Loch Broom - -	0	0	0	40	35	0	40	35	0	75 ,,
Stornoway - -	27	24	0	2	6	0	29	30	0	59 ,,
Anstruther - -	8	13	0	15	20	0	23	33	0	56 ,,
Peterhead, Wick, Shetland.	8	0	0	0	0	0	8	0	0	8 ,,
Totals - - -	127	114	2	124	141	4	251	255	6	
	243			269			512			512 ,,

Description of the Food observed in the Stomachs of Herrings sent from Loch Fyne, the Firth of Clyde, Loch Broom, Stornoway, Anstruther, and other places.

In describing the food observed in these herrings' stomachs, the various samples from the same place or district are arranged together under the name of the district and according to the date on which they were examined, and for convenient reference the names of the districts arranged as in Table II.

(1) LOCH FYNE HERRINGS.

December, 1904.—The stomachs of seventeen herrings sent from Loch Fyne were examined at this date. They all contained some food, but it was so disintegrated by the digestive fluids that only in three examples could the nature of it be determined, and even in these to a limited extent. The food in these three stomachs appeared to consist exclusively of Schizopods belonging to the Euphausiidæ. Neither the species or genus could be satisfactorily determined, but probably they were all young *Nyctiphanes, norvegica* as that species is common in Loch Fyne.

February, 1905.—The stomachs of six herrings from a sample sent from Loch Fyne contained each a considerable amount of *Calanus helgolandicus.*

July, 1905.—No more herrings from the Loch Fyne district were submitted for examination till July, when the stomachs of twenty-three specimens were examined. These form part of a sample captured about the end of April and retained during the interval in a cold storage chamber. All the stomachs contained food, and in most of them the quantity observed was considerable, and with two exceptions consisted entirely of Copepoda—*Calanus helgolandicus* being apparently the only species represented. In the two exceptions referred to the food consisted of post-larval fishes and *Calanus*, and my notes indicate that the food in these two was more decomposed than in the others, due probably to the presence of the young fishes.

September 22nd, 1905.—The stomachs of eight herrings were examined. They were from a sample sent from Strachur, and captured two days previously. Two of them were considerably distended, but contained no food ; three contained some red-coloured matter, but there was nothing that could be identified ; one was packed full with *Calanus* ; in the other two there was some red-coloured stuff with fragments of Copepods mixed up with it.

December 11th, 1905.—The stomachs of thirty-four herrings sent from Loch Fyne were examined. Sixteen were found to be empty, or contained some red-coloured matter probably derived from *Calanus*, but no trace, even of their appendages, could be detected. All the others contained the remains of *Calanus*, the specimens being in a number of cases tolerably whole, in others they were more or less fragmentary. There was also present in many of the stomachs a quantity of red-coloured oily matter derived probably from the *Calanus.* The fish whose stomachs contained food comprised 6 ♀ and 12 ♂, and the others 7 ♀ and 6 ♂.

January, 1906.—The stomachs of twenty herrings sent from Strachur were, with one exception, found to contain food, which appeared to consist entirely of *Calanus.* Some of the stomachs contained a considerable quantity of food. The fishes comprised 11 ♀ and 8 ♂. The empty stomach belonged to a male fish.

September 8th, 1906.—Eleven stomachs from Loch Fyne herrings were examined at this date. One contained some food too much digested for identification. One contained *Calanus, Centropages hamatus, Metridia lucens*, and young Euphausiidæ. One contained *Calanus, Centropages hamatus, Evadne nordmannii*, and some Decapod larvæ, and another contained a small quantity of *Calanus* only. The food observed in five of the others consisted entirely of *Nyctiphanes norvegica*, while two contained the remains of Euphausiidæ which probably also belonged to *Nyctiphanes*, but they were too much digested to be satisfactorily determined.

October 12th, 1906.—The eleven stomachs of Loch Fyne herrings examined at this date all contained food, in most cases in considerable quantity. The sexes represented comprised 9 ♀ and 2 ♂. The food observed in two stomachs consisted chiefly of *Calanus*, but *Centropages hamatus, Temora longicornis, Oithona similis*, and Decapod larvæ were also present. A small quantity of food, apparently all *Calanus*, was observed in another. A third contained a moderate quantity of *Calanus*, but *Temora longicornis* was also present. The food observed in other four appeared to consist entirely of Euphausiidæ, and were probably all *Nyctiphanes*—at least this was the only species that could be identified.

One contained *Calanus*, *Metridia lucens*, another a small number of Decapod larvæ, while one contained the remains of a considerable number of Euphausiidæ (*Nyctiphanes* probably), and a few post-larval fishes which appeared to be sand-eels.

November 9th, 1906.—The stomachs of four herrings from Loch Fyne examined at this date contained a considerable quantity of food which appeared to consist entirely of *Calanus.* The fishes comprised 2 ♀ and 2 ♂.

December 18th, 1906.—A small sample consisting of the stomachs of three Loch Fyne herrings (2 ♀ and 1 ♂) contained a small quantity of food of a semi-fluid nature, but no trace of anything that could be identified.

(2). THE CLYDE.

June 2nd, 1905.—Examined the stomachs of twenty-seven herring sent from Campbeltown. One contained one or two fish scales, another was filled with *Nyctiphanes*, and two contained some red-coloured matter with fragments of *Calanus* mixed up with it; the others were either empty or contained nothing that could be identified.

July 3rd, 1905.—Examined the stomachs of thirty-six herrings also from Campbeltown, but only five of them contained food that could be determined even in a limited degree. These fishes had been captured on 11th March, and kept in a cold storage chamber. In one the food consisted of Annelids (Chætopoda) and Amphipoda (Hyperiidæ), while the other four contained the remains of Crustacea, apparently belonging to *Calanus*.

August 9th, 1905.—The stomachs of nineteen herrings from Pirnmill, Kilbrennan Sound, were examined at this date, but captured on the 26th of the preceding month. Seven were empty or did not contain anything that could be identified. Ten contained food which appeared to consist entirely of Schizopods (Euphausiidæ), probably all *Nyctiphanes norvegica*,—at least those specimens that could be satisfactorily distinguished belonged to that species. In one which contained only a small quantity of Crustacean remains, the only species identified was *Centropages hamatus*, while another contained Crustacean remains that could not be determined with certainty.

September 2nd, 1905.—Twenty-five stomachs of herrings from Carradale were examined, but they had been captured on July 26th. They were all empty, and many of them were distended with air. The fishes comprised 14 ♀ and 11 ♂. In several cases the stomachs were covered externally with white clean fat.

January 21st, 1906.—Eleven stomachs of herrings from Campbeltown contained food that consisted chiefly of *Nyctiphanes norvegica*, some *Calanus* being also present. Most of the stomachs were full, and some were considerably distended by the large quantity of food they contained. Five of the herrings were females and six males.

December, 1906.—No further stomachs of herrings from the Clyde were submitted for examination till December, when four from a sample sent from Girvan and the same number from a sample from Rothesay were examined. Those from Girvan all contained food that could be identified. One contained a moderate quantity of food which appeared to consist entirely of *Calanus* in a fragmentary condition. One contained Euphausiidæ very much digested, while the food observed in the other two consisted of Euphausiidæ and *Calanus*.

Three of those from Rothesay contained only a small quantity of food, which consisted entirely of *Calanus*, and the other was well filled with apparently the same organisms, but too much decomposed to be satisfactorily identified.

January, 1907.—The stomachs of fifteen herrings from the Clyde were examined; they comprised small samples from two or three different places. Five sent from Rothesay contained food that appeared to consist entirely of young Euphausiidæ, some of which that could be identified, and probably the others also, belonged to *Nyctiphanes norvegica.* The food observed in other six stomachs consisted of *Calanus* only, of which there were a considerable quantity. In other three the food consisted of *Calanus* (chiefly), *Sagitta* and young Euphausiidæ, and one was distended with food consisting chiefly of *Nyctiphanes*, but some *Calanus* were also present.

February, 1907.—The number of stomachs from Clyde herrings examined in February was thirteen. Eight were from two samples sent from Campbeltown, and five from a sample from Rothesay. Four of the stomachs from Campbeltown herrings contained food that consisted entirely of *Calanus.* One contained a large quantity of *Nyctiphanes*, while the food observed in the other three consisted of *Calanus* and *Nyctiphanes.* The stomachs of the five herrings from Rothesay differed much from those from Campbeltown; two were empty, two contained a small quantity of red-coloured matter, but nothing that could be distinguished, while the only thing distinguishable in the other consisted of a few fish scales.

March, 1907.—The stomachs of eighteen herrings from the Clyde were examined in March; they included eleven from Campbeltown, four from Skipness, and three from Girvan. All the stomachs of the Campbeltown herrings contained food that could be identified. In four the food appeared to consist entirely of *Calanus;* other organisms may have been present, but the food had become so much decomposed that only the *Calanus* could be satisfactorily identified. The food in one stomach consisted entirely of young Euphausiidæ, while the contents of the other six comprised *Calanus* and Euphausiidæ in varying proportions. In three cases the Euphausiidæ present in these stomachs were certainly *Nyctiphanes norvegica*, and probably all those observed belonged to the same species. Of the four stomachs from Skipness herrings two were empty; one contained a small quantity of food, but it was too much decomposed for identification, while the other which was tolerably well filled contained Euphausiidæ and *Calanus* in a partially digested condition. The contents of one of the stomachs of the Girvan herring consisted of *Calanus*, *Pseudocalanus elongatus*, young Euphausiidæ, and some fish eggs. This stomach was moderately well filled with food, but the other two were empty.

April, 1907.—The stomachs of a few herrings from Skipness and Machrie Bay (Kilbrennan Sound) were examined—two from the former and three from the latter place. Those from the Skipness herring contained so much food as to be somewhat distended with it; one was filled for the most part with *Calanus*, but three moderately large *Nyctiphanes* were also present; the other contained *Nychtiphanes* and *Calanus* in about equal quantities. On the other hand, the stomachs of the herrings from Machrie Bay, though at first sight apparently containing a moderate amount of food, were found on examination to consist only of some red-coloured stuff that could not be identified, though probably it was part of the remains of some *Calanus*.

(3) LOCH BROOM.

February 1st and 2nd, 1905. The stomachs of forty-nine herrings captured in Loch Broom, West Ross-shire, were examined in February, 1905 ; a considerable proportion of them were entirely empty, a number of the others contained some red-coloured fluid, probably derived from organisms captured by the fishes, but there was nothing that could be identified. In several instances the stomachs were distended with air, the result perhaps of fermentation. The fishes represented by these stomachs comprised 29 ♀ and 20 ♂.

June 1st, 1905.—Thirty-six stomachs of herrings sent from Loch Broom were examined at this date. The results obtained resembled generally those of the previous sample. A number of the stomachs were found to be entirely empty, and the others contained some semi-fluid matter usually of a reddish colour, but no trace of anything that could be identified with certainty. In some cases, as in the previous sample, the stomachs were considerably distended with air.

(4) STORNOWAY.

June, 1905.—The stomachs of thirteen herrings, being part of a sample sent from Stornoway on May 19, were examined in June. They all contained food which, with one exception, consisted for the most part of post-larval fishes. In the one stomach referred to, however, no fishes were observed, but the food consisted entirely of Decapod larvæ, of which there were a considerable quantity. Eight stomachs contained fishes only, while the others contained both fishes and crustacean larvæ. The fishes appeared to be mostly sand-eels, but Clupeoids may, in some cases, have also been present; the food, however, had already undergone digestion to some extent, and the species could not in a few examples be satisfactorily determined. One stomach at least was crammed full with post-larval sand-eels, and two others were fairly well filled with the same kind of fish. The only other organism observed in addition to the Decapod and fish larvæ was a single specimen of *Caligus rapax.* All the thirteen herrings were females with undeveloped ovaries.

July 7th, 1905.—The stomachs of thirty-four herrings sent from Stornoway were examined. Eight of them were either empty or contained a small quantity of semi-fluid matter, but nothing that could be identified. The other twenty-six contained food which consisted for the most part of post-larval fishes, chiefly sand-eels. In only two examples were fish remains apparently absent, and the food in one of these consisted of the remains of Calanoida and in the other of Euphausiidæ, but these organisms were so much disintegrated that the species could not be satisfactorily determined.

Eight stomachs were distended with the large quantity of young fishes they contained, while as many more were tolerably well filled with them. In a few cases *Calanus* were found in the same stomachs with the fishes. Seven of the thirty-four herrings were spawners, but there was no indication that difference in sex resulted in any difference in the nature or quantity of the food consumed.

January 17th, 1907.—The stomachs of two herrings (♀ and ♂)—part of a sample from Stornoway—contained each a small quantity of food consisting of fragments of Schizopods (Euphausiidæ) ; they were so disintegrated as to be almost indistinguishable, but the only fragments that could be identified with certainty belonged to *Nyctiphanes.*

February 14th, 1907.—Six herrings (5 ♀ and 1 ♂), from another sample sent from Stornoway, had all of them food in their stomachs. Two were tolerably full, but the quantity in the others was small. One contained post-larval fishes—apparently Clupeoids, but the food observed in the others consisted only of *Nyctiphanes.*

March 16th, 1907. The stomachs of four herrings (3 ♂ and 1 ♀), part of a sample also from Stornoway, contained each a fair quantity of food. In one, which was tolerably well filled, the food consisted partly of *Nyctiphanes* and partly of Hyperiidæ (*Parathemisto*), but in the other three it consisted of *Nyctiphanes* only.

(5) ANSTRUTHER, FIRTH OF FORTH.

June 6th, 1905.—The stomachs of fifteen herrings from a sample sent from Anstruther were examined for food; with one exception, they were all male fishes. Only three of the stomachs contained food; all the others were empty. The food observed consisted entirely of *Parathemisto oblivia.* One of the stomachs containing *Parathemisto* was that of a female fish.

June 10th, 1905.—Twenty-five stomachs from another sample of herrings sent from Anstruther were examined. Eleven were found to be empty, and of the others one contained the remains of crustacea—probably fragments of *Parathemisto*—but they could not be satisfactorily determined. The food observed in five of the others appeared to consist entirely of the species of Amphipod just referred to, while that contained in the other eight stomachs included both *Parathemisto* and Euphausiidæ. These Schizopods, though they could not be identified with absolute certainty, appeared to belong to *Thysanoessa* sp. Four of the stomachs (two from female and two from male fishes) were distended with the large amount of food they contained, and which consisted of Amphipods and Schizopods in about equal proportions.

(6) PETERHEAD, WICK, AND SHETLAND.

November, 1906.—The stomachs of a few herrings representing samples sent from Peterhead, Wick, and Shetland, were examined in November. Two, which were those of fishes belonging to a sample from Peterhead, contained each a tolerable amount of food. In the one case it consisted for the most part of the Decapod larvæ and in the other of *Calanus helgolandicus.*

Three stomachs of herrings from a sample sent from Wick were also found to be well supplied with food. In two of them the food appeared to consist entirely of *Metridia lucens*, and in the other of young fishes which were too much decomposed to be satisfactorily identified.

The remaining three stomachs were those of herrings from a sample sent from Shetland. Like the others, they each contained a considerable amount of food, but in this case it consisted entirely of Euphausiidæ, but it was not in a condition to permit of an exact determination. From a careful examination of the fragments, however, I think it highly probable that they belong to the genus *Thysanoessa.*

I now append in tabular form the names of the various organisms referred to in the preceding notes.

[TABLE.

TABLE III.

List of organisms observed in the preceding notes with the localities where the herrings were sent from.

Names of the Organisms.	Loch Fyne.	Clyde.	Loch Broom	Stornoway.	Anstruther.	Peterhead.	Wick.	Shetland.
Post-larval fishes—Clupeoids (?)	+	...	The only food observed in stomachs from Loch Broom was some red-coloured matter, probably derived from *Calanus.*	× ?	...	...	+ ?	...
,, ,, Sand-eels -	+ ?	...		+ +	...	...	...	...
Fish eggs - - - - -	...	+		...	...	...	...	...
Fish scales - - - - -	...	+		...	...	...	...	...
Nyctiphanes norvegica - -	+ +	+ +		+	...	...	...	...
? Thysanoessa, sp. - - -	...	...		...	+	...	...	+ +
Euphausiidæ - - - - -	+ +	+ +		+ +	+ +	...	...	...
Hyperia galba ? - - -	...	+		...	...	...	...	...
Parathemisto oblivia - -	...	...		+	+ +	...	...	...
Evadne Nordmanni - -	+	...		...	...	...	...	...
Calanus helgolandicus - -	+ +	+ +		+	...	+ +	...	...
Pseudocalanus elongatus -	...	+ +		...	...	...	...	...
Centropages hamatus - -	+	+		...	...	...	...	...
Temora longicornis - -	+	...		...	...	...	...	...
Metridia lucens - - -	+	...		...	...	...	+ +	...
Oithona similis - - -	+	...		..	...	...	...	...
Caligus rapax - - - - -	...	...		+	...	...	...	...
Decapod larvæ - - -	+	...		+ +	...	+ +	...	...
Annelida—Chætopoda - -	...	+		...	...	...	...	...
,, Sagitta - - - -	...	+ +		...	...	...	...	...

NOTE—The sign + indicates that the organism was generally not very plentiful in any stomach examined. + + indicates that the organism occurred in at least some of the stomachs in considerable quantity.

It will be observed from this Table and from that in Brook and Calderwood's paper in the *Fourth Annual Report of the Fishery Board for Scotland*, that the food of herring captured off the coasts of Scotland consists mainly of four or perhaps five groups or organisms, viz., (1st) Post-larval fishes, (2nd) Amphipoda, (3rd) Copepoda, (4th) Schizopoda, and (5) Decapod larvæ, and a few remarks on each of these groups may not be out of place here.

1st—Post-larval fishes. The post-larval fishes most frequently mentioned by Brook and Calderwood are Clupeoids—chiefly young herrings and sprats. Sand-eels are only recorded eleven times, from places all on the East Coast, and were from herring taken at various times during the year, from January to August. They occurred usually in quantity. In the stomachs examined for this paper, sand-eels in quantity were only observed in herrings from Stornoway, and a few doubtful examples were noticed in Loch Fyne herrings. Clupeoids were seldom observed in the fishes examined for this paper.

2nd—Amphipoda. The only species of Amphipoda that appear to be of much importance as herring food belong to the Hyperiidæ, and those that have been most frequently recorded are *Hyperia galba* and *Parathemisto oblivia.* The first is the form commonly mentioned by Brook and Calderwood, but it has been rarely met with in the stomachs examined for this paper. Hyperiidæ have been met with in the stomachs of herrings chiefly from the East Coast and during the first three and the last months of the year, but they have also been occasionally observed in June and July. The authors referred to above do not appear to have obtained them in the stomachs of any herrings from the West Coast. They occurred, however, in March in three stomachs of herrings sent from Stornaway, which is a West Coast station (see notes under Stornoway). It is an interesting question why the Hyperiidæ should so frequently occur in the stomachs of East Coast herrings and so sparingly in those from the West Coast.

3rd—The Copepoda. The most important of the Copepod species as herring food is undoubtedly *Calanus.* It will be observed that the name given in my list to this form is *Calanus helgolandicus*, Claus, but after all it may only be a smaller form of *Calanus finmarchicus*, Gunner, for, with the exception of size, the differences between them is not very marked, and a familiarity with the two forms is necessary to enable one to separate them—but this is a question that need not be discussed here.

Calanus is usually observed in greater quantity in stomachs of West Coast herrings, and especially of those from the Clyde and Loch Fyne, than in those from East Coast fishes, and it is noteworthy that the species, though common enough in the Firth of Forth, appears to form a very small portion of the food of herrings captured in that estuary. In Brook and Calderwood's paper Copepoda are recorded on only two occasions from herrings sent from the Firth of Forth, and they were not observed at all in the stomachs of the herrings sent from Anstruther and examined for this paper. *Calanus* has been obtained in the stomachs of Loch Fyne and Clyde herrings, frequently in considerable quantity, from April till November, in those from Stornoway in May and June, and in those from Shetland in April. Other species of Copepoda are sometimes observed in the stomachs of herrings, i.e. *Centropages hamatus* and *typicus*, *Temora longicornis*, *Metridia lucens*, *Pseudocalanus elongatus*, *Acartia* sp. and *Oithona similis*, but seldom in any quantity, and are only of interest as bearing on the extensive bill of fare from which the herring may select its food.

4th—Schizopoda. All the Schizopoda found in the stomachs of herrings caught off the Scottish coasts are, with few exceptions, members of the family Euphausiidæ, and belong to one or other of the three genera *Nyctiphanes*, *Rhoda* (better known perhaps as *Boreophausia*) and *Thysanoessa.* On the other hand, Schizopoda belonging to the family Mysidæ such as *Schistomysis spiritus*, Norman, and *Macromysis flexuosa* (O. F. Müller), which at times are met with in swarms, and other species of less frequent occurrence as *Leptomysis gracilis*, *Gastrosaccus spinifer*, but which are also widely diffused in our coastal waters, are rarely observed amongst the food of herrings. The only Schizopod mentioned by Brook and Calderwood, other than species belonging to the Euphausiidæ, is a *Siriella*, and it is recorded from the stomach of a herring from Tarbert, Lower Loch Fyne. One notable characteristic of the Euphausiidæ is that they all possess phosphorescent organs, which appear to be entirely wanting in the Mysidæ. This power of becoming luminous which the Euphausiidæ possess may explain to some extent why they receive so much attention from the fish, while the others are as seldom found in their stomachs.

The Euphausiidae may be considered as equal to or even of greater importance than the Calanoida as a food supply for herring both on the East and West Coasts. Moreover, they have been observed in the stomachs of herrings more or less all through the year from January to December, though they appear to be more commonly met with during the earlier and later months of the year.

The Schizopod most in evidence, and most frequently recorded as herring food, is *Nyctiphanes norvegica* (M. Sars), while *Thysanoessa* and *Rhoda* are only occasionally mentioned; these two forms may, however, occur more frequently than the records of them would seem to indicate, for it is quite possible they may sometimes be included under the more general name of Euphausiidæ. The use of this less definite name is often rendered necessary owing to the disentegrated condition of the food, which, though perfect enough to show the relationship of the organisms composing it with the family referred to, are too incomplete to permit of the satisfactory identification of the species or even of the genus to which they belong.

5th—Decapod larvæ. In the observations on the food of herrings given under each district, it will be observed that Decapod larvæ, though they may occasionally be found in considerable numbers in a few of the stomachs examined, they do not appear to hold a very important place in the herrings' bill of fare. Of the stomachs containing food examined for this paper, Decapod larvæ were observed in scarcely $3\frac{1}{2}$ per cent. of them, and the percentage of records for these larval forms in Brook and Calderwood's paper was even less. This infrequency of their occurrence in the stomachs of herrings, as compared with *Calanus*, can hardly be ascribed to the rarity of these organisms, for at times they are present in the sea in considerable numbers, as shown in plankton gatherings. It has to be remembered, however, that many of these larvæ are provided with a tough carapace and a spiny armature of a somewhat formidable character, which may tend to make herrings reluctant to attack them if other food of a more harmless kind be within reach.

Some other forms, *i.e.*, *Pseudocalanus*, *Centropages*, *Temora*, &c., among the Copepoda, *Evadne*, as representing the Cladocera, *Sagitta*, and other Annelida, and the eggs and scales of fishes have also been recorded, but they occur so very sparingly as to suggest that their presence with the other organisms in the stomachs may be due to their having been accidentally captured by the fish while in pursuit of other species.

In dealing with a subject like this, it sometimes happens that a question emerges which, though not bearing directly upon it, is yet of interest because of its negative character. In studying the food of herring it soon becomes evident that *Calanus*, for some reason, forms an important part of it, and one likely reason, though it may not be the only one, is that this Copepod abounds everywhere throughout the wide area where herring fisheries are carried on. It has also been shown that the herring does not gather its food from the water merely by using its gills as a kind of seive, but hunts for and captures the organisms it lives on, and this seems to indicate that the fish may be able to some extent to discriminate between forms it prefers and those it dislikes. But though it may be able to do so, it is doubtful if it can distinguish differences that seperate closely-allied species, as, for example, between *Calanus* and *Pseudocalanus*, or between that species and *Temora* or *Metridia*, except that the *Calanus* is larger than the others. It is not surprising, therefore, to find that while the herring apparently prefers *Calanus*, other species should occasionally be present amongst its food, especially if they are moderately common. Keeping this in view, it is interesting to note that in the published accounts relating to the food of Clyde and Loch Fyne herrings there is not, so far as I know, a single record of *Euchæta norvegica* having been observed amongst the food contained in their stomachs. This *Euchæta* is now known to be generally common and at times abundant in Loch Fyne and it is moderately frequent in other portions of the Clyde area, but in none of the samples of Clyde herrings submitted for examination has *Euchaeta* been observed as part of their food. No doubt this Calanoid appears to be a true deep-water form, but it is also occasionally obtained amongst plankton collected comparatively near the surface of the water, and thus comes quite within the reach of the herrings. It is a large species, much more so than *Calanus*, but not too large for herring to swallow, seeing that the Euphausiidæ are so frequently captured by them. The *Euchætae* are also rich in oily matter, and apparently of as much value as *Calanus* for herring food, yet the herring appears to reject them.

The stomachs examined for this paper number, as already stated, five hundred and twelve. Two hundred and forty-three contained food of a more or less definite kind, while two hundred and sixty-nine were empty or their contents could not be identified. Each of these two groups comprised a nearly equal number of spawners and milters. In the first the females are rather in excess of the males, while in the other the number of males is slightly the greater, but whether food was present or absent, or showed variation in its amount or kind, nothing was observed which could be ascribed to difference in the sex of the fish.

"GUT-POKE" IN HERRING.

The term "gut-poke" in herring has long been familiar to fishermen on the West Coast.

In an interesting paper by the late GeorgeBrook, F.L.S., entitled—"A Report on the Herring Fishery of Loch Fyne and Adjacent Districts,"* a short paragraph is devoted to the subject of gut-poke in herring, and it is stated that almost all the herrings in Loch Fyne are liable to the complaint, and that in the month of June the majority of them were in this condition ; he also directs attention to the deterioration in the market value of herrings affected by gut-poke.

In the summer of 1894, Dr. Fulton, the Scientific Superintendent of the Fishery Board, desired me to visit Tarbert to make some inquiries into the food of herrings, and suggested that the question—"What is gut-poke in herring ?" might receive some attention. Certain inquiries were accordingly made concerning this matter and the results embodied in a short communication to Dr. Fulton, and in the remarks which follow I have incorporated some of the results referred to in that communication. And I would remark, first, that the term "gut-poke" is applied to that condition in herrings when their stomach and intestines are distended with food of a soft and oily nature, such as *Calanus*, post-larval Clupeoids, and the like, the quantity of food in the stomach being so great that it passes into the intestines without being properly digested. When such herrings are captured decomposition rapidly sets in, and they soon become useless and even dangerous as food.

"Gut-poke" is not necessarily limited or peculiar to large or small fishes, but, on the other hand, it seems to be most frequently observed in those with immature reproductive organs. The gut-poke condition is seldom noticed in herrings which are sexually mature or nearly so. But though overfeeding appears to be the immediate cause of gut-poke, herrings are frequently obtained which have a considerable amount of food in their stomach without the gut-poke condition being present.

It is doubtful if a really satisfactory explanation can be given about the true cause of gut-poke in herrings, *i.e.*, the reason why at certain times a seemingly abnormal desire for food affects them, and they feed ravenously till the stomach and intestines become gorged, but whatever the cause may be it is apparently only of temporary duration.

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* *Fourth Annual Report of the Fishery Board for Scotland* (1886), p. 47.

When under the influence of this abnormal craving the fish sometimes approach the surface of the water even during the middle of the day, and have been observed by fishermen greedily feeding on *insects* (probably Copepoda) and young fishes, and this is confirmed by the fact that several of the herrings I examined at Tarbert at the time referred to had their stomachs filled with young herring or sprats about an inch and a half in length. This ravenous desire for food has been ascribed to some disease in the fish, but Mr Brook was inclined to doubt this. Herrings which are finest in quality have usually their stomach and intestines almost empty and their internal organs covered with white healthy fat.

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